

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLORADO

FILED
U.S. DISTRICT COURT
DISTRICT OF COLORADO

Civil Action No. 00-S-424

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PACIFICORP, an Oregon corporation,

JAMES R. HANISPEAKER
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Plaintiff,

BY _____ DEP. CLK

v.

UNION OIL COMPANY OF CALIFORNIA, a California corporation; and
MINERALS EXPLORATION COMPANY, a California corporation,

Defendants.

TRIAL BRIEF OF DEFENDANTS UNION OIL COMPANY OF CALIFORNIA
AND MINERALS EXPLORATION COMPANY
FOR PHASE 1 TRIAL

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SUMMARY

**IN THE UNITED STATES DISTRICT COURT
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PACIFICORP, an Oregon corporation,

Plaintiff,

v.

UNION OIL COMPANY OF CALIFORNIA, a California corporation; and
MINERALS EXPLORATION COMPANY, a California corporation,

Defendants.

**TRIAL BRIEF OF DEFENDANTS UNION OIL COMPANY OF CALIFORNIA
AND MINERALS EXPLORATION COMPANY
FOR PHASE 1 TRIAL**

SUMMARY

This is a contribution action under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601, et seq. ("CERCLA"). PacifiCorp, the plaintiff, seeks to compel Union Oil Company and a wholly owned subsidiary, Minerals Exploration Company, to pay for or contribute to the remediation of a tailings pond PacifiCorp owned for at least 78 years. The tailings pond is located on the Roanoak placer mining claim near the town of Ophir in San Miguel County, Colorado. PacifiCorp claims that, beginning in 1998, it has spent or will spend \$1.5 million cleaning up its tailings pond. (The tailings pond may be referred to as the "Site.")

PacifiCorp or its predecessors (collectively "PacifiCorp") owned the tailings pond at least from 1913 until 1991. During that time, PacifiCorp allowed mining companies to deposit

tailings on its property. (Tailings is the waste generated by the milling of hard rock ores.) PacifiCorp does not assert that Defendants have any direct liability for the Site, *i.e.*, liability based on their own ownership or operation of or their disposal of materials in the Roanoak tailings pond. Rather, the sole basis on which PacifiCorp asserts Defendants are liable is as successors to Silver Bell Industries and Silver Bell Mines, two companies that it claims sporadically conducted mining or milling activities in the Ophir area from 1946-1975. (Ex. 501, Amended Complaint ¶¶ 9, 37-48, 51, 62.) It is undisputed that Union and its affiliates never owned the Roanoak claim, never conducted mining or milling activities at the Roanoak, and never placed tailings on the Roanoak.

PacifiCorp claims that, by virtue of a 1978 Agreement under which Minerals Exploration purchased substantially all of the assets of Silver Bell Industries in exchange for \$23.5 million of Union Oil Company stock ("the 1978 Agreement"), Union and/or Minerals Exploration have successor liability for both Silver Bell entities and are liable for some or all of the costs PacifiCorp has incurred or will incur to remediate its tailings pond.¹

More specifically, the Amended Complaint asserts the following claims against Union and Minerals: (1) declaratory judgment that Defendants are successors in interest to Silver Bell Mines and Silver Bell Industries; (2) declaratory judgment that Union and Minerals are strictly

¹ PacifiCorp apparently will also claim that, because another subsidiary of Union Oil, MolyCorp Inc., applied for transfer to it of a water discharge ("NPDES") permit issued in 1976 to Silver Bell Industries allowing discharges to a stream adjacent to the tailings pond, *Union* assumed Silver Bell Industries' liability under that permit. Union and Minerals object to any such claim. It is premised on the activities of a separate corporate entity that is not a party to this action. No claim has been pleaded that Union or Minerals can be held liable for the actions of such separate corporate entity. It is wrong as a matter of law. See Sec. VI, infra.

liable for future response costs under Section 113(g)(2) of CERCLA, 42 U.S.C. § 9613(g)(2); (3) contribution under Section 113(f)(1) of CERCLA for past response costs; (4) breach of contract and express indemnification; (5) negligence; (6) strict liability; (7) implied indemnity and unjust enrichment; (8) contribution under the Uniform Contribution Among Tortfeasors Act ("UCATA"). Defendants filed and have pending motions to dismiss all claims except the CERCLA contribution claims and the breach of contract claim. Those motions have not been ruled on.

Pursuant to a joint motion of the parties, the Court ordered a bifurcation of this case into two phases. Phase 1 will address only the issue of whether Defendants have successor liability for the actions of the Silver Bell entities. If not, the action will be dismissed. If so, the case will proceed to Phase 2 which will address the remaining issues, specifically how liability at the Site should be allocated among the various responsible parties. This memorandum will show, as a matter of undisputable fact and well established law, that PacifiCorp has not shown and cannot show that Union or Minerals has any successor liability for any actions of the Silver Bell entities. This action should be dismissed.

PacifiCorp's claim is that Union and Minerals have successor liability because of a 1978 Agreement in which Minerals purchased substantially all of the assets of Silver Bell Industries and paid for those assets with Union stock. This brief will show this claim fails for the following reasons:

1. It is a fundamental principal of corporate law, fully applicable under CERCLA, that a company that purchases the assets of another entity does not acquire the liabilities of the selling entity.

2. There are four and only four exceptions to this general rule:
 - a. The purchaser expressly or impliedly agrees to assume the liabilities;
 - b. The transaction meets the requirements of a "de facto merger";
 - c. The transaction is such that the buyer is a mere continuation of the seller;
 - and
 - d. The transaction is fraudulently entered into to escape the liabilities asserted.

3. On the facts before this Court, none of the exceptions applies. Union, Minerals and Silver Bell Industries, the parties to the 1978 Agreement, expressly agreed that Union and Minerals would not generally assume Silver Bell liabilities. The liability now asserted – to pay for or contribute to the reclamation of PacifiCorp's tailings pond – does not fit within the narrow scope of the liabilities that Minerals did assume. The transaction was a straightforward asset acquisition and does not meet the well recognized elements of either a de facto merger or a mere continuation of Silver Bell. Finally, the transaction was in no way fraudulent. It was a highly negotiated, arms length transaction, in which Silver Bell received more than \$23 million in Union stock for the assets it sold.

4. PacifiCorp apparently will also claim that somehow Union and Minerals have liability because another affiliate (MolyCorp Inc.) accepted transfer of a 1976 NPDES permit originally issued to Silver Bell Industries, in which the State had imposed certain obligations on Silver Bell. Defendants object to any such claim and evidence related to it. This claim has not been pleaded and should therefore be dismissed as a matter of law. Substantially, it is in effect a citizen's suit under the Clean Water Act. The express terms of the Act bar the claim on a number

of grounds. Furthermore, the predicate act itself, acceptance of transfer of an NPDES permit, does not make the permit transferee liable for the acts of its predecessor.

Structure of Phase 1 Trial: Stipulated Record.

PacifiCorp bases its claim of successor liability on a 1978 transaction between Union, Minerals and Silver Bell Industries. The operative facts occurred during the period of 1975-80 and before. No Silver Bell witnesses with substantive knowledge of the transaction remain alive and available to testify. Few Union or Minerals witnesses with substantive knowledge are alive, and they have very limited recollections and pertinent facts. Accordingly, the parties presently intend to submit this case for trial on a paper record. That record will include the depositions of those few individuals who have been located who have a recollection, stipulated facts as to certain issues, and a substantial volume of documents from the 1975-80 time period. The parties have stipulated that the documents are authentic and admissible, save only for relevance issues. The trial will consist of oral argument and response to questions or issues of the Court. One result of this approach is that, because there will be no trial testimony and no documents presented through live witnesses, it is necessary to present an unusually comprehensive trial brief, with a highly detailed Statement of Facts and citations to the record documents.

The Statement of Facts references five factual sources that will be provided to the Court at trial on January 31, 2001. (1) Facts that are not in dispute and that are set forth in the Stipulations of Parties (Phase 1). These are found in the binder labeled "Stipulated Exhibits." Citations to the Stipulations are referred to as "Stip." followed by the corresponding paragraph number. (2) Documents referenced in the Stipulations are in the "Stipulated Exhibits" binders. The Stipulated Exhibits are numbered Ex. S-1 through Ex. S-74. (3) Documents which

Defendants have designated as exhibits. These documents are provided in the binders labeled, "Defendants' Exhibits" and are numbered Ex. 501 through Ex. 574. (4) Deposition Exhibits which Defendants have designated as Exhibits. These Exhibits are provided in the binders labeled "Defendants' Deposition Designations and Deposition Exhibits" and are identified as "Dep. Ex." (5) Defendants' designated portions of Deposition Transcripts which are provided in the binders labeled "Defendants' Deposition Designations and Deposition Exhibits."

FACTS

STATEMENT OF FACTS

I. PARTIES

1. Plaintiff PacifiCorp is an Oregon corporation with its principal place of business located in Portland, Oregon. PacifiCorp and its predecessors owned the Roanoak placer mining claim that is the subject of this action for at least seventy-eight years, from 1913 until 1991. (*Stip.* ¶¶ 1, 7-9; *Ex. 501, Amended Complaint ("Am. Compl.")* ¶¶ 1, 13, 25, 27.)

2. Defendant Union Oil Company of California ("Union") is a California corporation authorized to conduct business in the State of Colorado. (*Stip.* ¶ 2.)

3. Defendant Minerals Exploration Company ("Minerals") was incorporated under the laws of the State of California on October 20, 1954. Minerals is now and has always been a wholly owned subsidiary of Union. (*Stip.* ¶ 3.)

4. Molycorp Inc. is not a Defendant in this action. Molycorp Inc. ("Molycorp") became a wholly-owned subsidiary of Union Oil Company on July 29, 1977. Molycorp has been a direct or indirect wholly-owned subsidiary of Union since that time. (*Stip.* ¶ 4.)

II. BACKGROUND ON PACIFICORP'S ROANOAK TAILINGS POND, SILVER BELL MINES COMPANY AND SILVER BELL INDUSTRIES

A. The PacifiCorp Tailings Pond.

5. The Site which is the subject of this action is a tailings pond located on the Roanoak placer, a patented mining claim located near Ophir in San Miguel County, Colorado. The Roanoak placer contains approximately 73 acres. The Roanoak tailings pond is small – approximately 4-6 acres. (*Ex. 501, Am. Compl.* ¶¶ 10-11; *Stip.* ¶ 6.)

6. PacifiCorp admits that a predecessor purchased the Roanoak placer in 1913 and that PacifiCorp or predecessors owned the Roanoak and the tailings pond continuously until it sold the property in 1991. Because PacifiCorp admits responsibility for its predecessors, this brief will refer to all prior owners' acts as to the property as being done by PacifiCorp or Plaintiff. (*Ex. 501, Am. Compl. ¶¶ 1, 13, 25, 27; Stip. ¶¶ 7-9.*)

7. PacifiCorp has not produced documents showing the full history of its Roanoak tailings pond. Apparently, however, PacifiCorp allowed mining companies to deposit tailings on the Roanoak throughout the property's history. By 1940, the property had sufficient tailings on it that a miner contracted with PacifiCorp to reprocess the tailings to extract minerals from them. The miner agreed to pay PacifiCorp a royalty based on the net smelter return from such production. (*Ex. 509, Lease between WCPC and D.P. Springer.*)

B. The Silver Bell Companies.

8. Silver Bell Mines Company allegedly operated the Silver Bell mill periodically from 1946 through 1954. The mill was located near PacifiCorp's Roanoak tailings pond. PacifiCorp asserts that Silver Bell Mines deposited tailings from its nearby mill onto PacifiCorp's tailings pond. Silver Bell Mines abandoned its milling operations by 1954 and PacifiCorp does not claim that Silver Bell Mines put additional tailings on PacifiCorp's Roanoak tailings pond after 1954. (*Ex. 501, Am. Compl. at ¶¶ 12, 14-15, 17.*)

9. On September 15, 1969, a new Colorado corporation, Silver Bell Industries, Inc., was formed. Silver Bell Industries apparently took over the properties and operations of Silver Bell Mines. (This brief will refer to Silver Bell Industries as "Silver Bell or

Silver Bell Industries," and to Silver Bell Mines Co. as "Silver Bell Mines.") (*Ex. 510, Articles of Incorporation of SBI; Ex. S-4, Final SEC Form S-14 at p. 47.*)

10. PacifiCorp claims in this action that Silver Bell Industries operated the mine and mill periodically between 1970-75 and disposed of tailings on PacifiCorp's Roanoak tailings pond. PacifiCorp admits that "[i]n 1975, Silver Bell abandoned the Silver Bell mine and mill operations, together with tailings operations at the Site." According to PacifiCorp, Silver Bell Industries' operations in the 1970's were relatively modest (70,000 tons milled) compared to the earlier operations of Silver Bell Mining (219,000 tons milled). The Amended Complaint contains no information on the volume of tails placed on the Roanoak tailings pond prior to the 1940s. (*Ex. 501, Am. Compl. ¶¶ 16, 17, 22, 23 and 24.*)

C. The 1970 Agreement.

11. On July 1, 1970, PacifiCorp entered into an agreement with Silver Bell Industries allowing it to deposit tailings from its milling on PacifiCorp's Roanoak property ("the 1970 Agreement"). It is significant that, under the 1970 Agreement, PacifiCorp controlled both the location and volume of tailings placed on its property. ("Power Company shall have the right to determine the location and extent of said tailings pond on said land, which shall be substantially as shown on the attached print." (*Stip. ¶ 10; Ex. S-2, the 1970 Agreement at ¶ 1.*))

12. Two paragraphs of the 1970 Agreement form a component of PacifiCorp's claims in this action. Paragraphs 4 and 5 provide:

The Mining Company [Silver Bell] agrees to hold Power Company harmless from any claim or liability arising in any manner from Mining Company's use of Power Company land under this agreement; and

Upon the termination of this agreement or upon cessation of the use of said placer as a tailings pond, the Mining Company agrees to do such work as is necessary to stabilize the pond.

(Ex. S-2, the 1970 Agreement ¶¶ 4, 5.)

PacifiCorp asserts that Union and Minerals have successor liability to Silver Bell under these provisions of the 1970 Agreement, and that these paragraphs obligate Union and Minerals to pay for full remediation of PacifiCorp's tailings pond. *(Ex. S-2, the 1970 Agreement; Ex. 501, Am. Compl. ¶¶ 20, 67-74.)* No copy of the 1970 Agreement was found in Union or Minerals files. PacifiCorp located the 1970 Agreement in PacifiCorp's files, and the map referenced in the 1970 Agreement has never been located. *(Ex. 505, Plaintiffs' Responses to Defendants' First Set Of Requests For Admission, Response No. 9, pp.9-10; Stip. ¶ 10.)*

13. Although these issues will be more significant in Phase 2 of the trial, it is important to note that, by the 1970 Agreement, PacifiCorp and Silver Bell may have intended that Silver Bell would construct a new tailings pond for its activities. A letter from Silver Bell's mining engineer Carlson to its President Sanders dated 6/12/70 (two weeks before the 1970 Agreement) says that "Harry Wright [PacifiCorp representative] called Wednesday night to inquire if we had started construction of a new Tailings Pond and I replied that we had not." Two weeks later, Carlson wrote another letter to Sanders saying, "Mr. Harry Wright submitted the enclosed two copies of a Tailings Pond Agreement for your signature and return of both copies to the Power Company The map is of a generalized nature but the area desired would extend southerly to the railroad grade." *(Ex. 512, Letter from Carlson to Sanders; see also, Ex. 513, Carlson's field Notes; Ex. 514, Letter from Carlson to Sanders.)*

14. PacifiCorp has not produced evidence to show whether a new tailings pond was built pursuant to the 1970 Agreement. PacifiCorp admits that the Roanoak tailings pond is apparently several ponds that abut one another, a large pond and, below that, several small pond areas. (*Ex. S-1, PacifiCorp Final Site Investigation Report; Ex. 505, Pl.'s Resp. To Defs.' Second Set of Interrog., Interrog. Resp. No. 18 at pp. 18-19 ("it became apparent that at least three relatively distinct areas contained varying amounts of tailings material"); see also, Ex. 515, letter from Kurai to CDPHE ("The tailings ponds . . . are composed of an upper pond and several lower ponds.")*.) PacifiCorp has no evidence that links the 1970 Agreement to any one or more of these several ponds.

15. PacifiCorp has not produced evidence to establish which companies put what amounts of tailings on its pond and when that occurred. Its Final Site Investigation Report submitted to the Colorado Department of Public Health and Environment in 1999 says only that "the majority of the Silver Bell tailings were deposited in the 1940's with a minor amount added during the 1980's." (*Ex. S-1*.) Whether either component of that statement (that majority was deposited in 1940's or only minor amounts were added in 1980's) is accurate would need to be verified.

III. UNION'S AND MINERAL'S CONNECTION TO SILVER BELL – 1978 PURCHASE OF SILVER BELL ASSETS

A. The Basic Transaction.

16. It is undisputed in this action that neither Minerals nor Union ever owned the Roanoak tailings pond or deposited any tailings on that facility. (*Ex. 501, Am. Compl. ¶¶ 24; Zinn Dep. at 19:6-11; 159:1-12*.) All tailings on the pond were placed there by other entities

either before or after Union's and Mineral's brief involvement in the area. Rather, the sole basis claimed for Union's and Minerals' liability here is that they are successors to Silver Bell Industries because of the 1978 transaction in which Minerals acquired the Silver Bell assets. (*Ex. 501, Am. Compl. ¶¶ 43-48, 55, 62-64, 73, 81, 86, 90-91, 94 and Prayer for Relief, ¶ 1.*)

17. On May 15, 1978, Union, Minerals and Silver Bell entered into an agreement under which Minerals agreed to acquire all Silver Bell assets in return for 418,095 shares of Union stock and the assumption of specified liabilities. The precise structure of the transaction was that Minerals Exploration Company, a wholly owned subsidiary of Union Oil Company of California, acquired the Silver Bell assets, and the purchase price was paid with shares of Union stock. (*Stip. ¶¶ 12-15; Ex. S-3.*) At the time of the contract, the value of stock was approximately \$21 million. (*Stip. ¶ 16.*) This was in the range of the amounts that other companies had offered SBI for its assets, as explained below at ¶ 50.

18. The transaction between Union, Minerals and Silver Bell closed in December 1978. (*Ex. S-4 at Annex III-13.*) By the time of closing, the value of Union stock had risen so the consideration paid to Silver Bell was approximately \$23.5 million. (*Stip. ¶ 19.*) (The completed transaction may be referred to as the "1978 Transaction.")

19. Silver Bell's principal asset, and the driving force behind this transaction, was its ownership of a 35% non-operating, carried interest in a uranium mining and milling project being developed in Sweetwater County, Wyoming ("Sweetwater Project"). Minerals Exploration held the 65% operating interest in that project. During 1976-78, Union and Minerals appraised Silver Bell's assets as being worth in the range of \$18.7 – 21 million. (*See below at ¶ 50.*) Virtually all that value was derived from Silver Bell's interest in the Sweetwater Project.

(Ex. S-4, Final SEC Form S-14 at pp. 47-50; McCloskey Dep at 49:2 - 50:4; Dep. Ex. 41.) The Sweetwater Project is described in more detail below at ¶ 30 and its subparts, and ¶ 31.

20. Silver Bell also owned or had rights to a number of other mining claims in Utah, Wyoming and Colorado. Among those other properties were some mining claims in and near Ophir, Colorado (the "Ophir Properties") which included the Silver Bell mine and mill site located near the Roanoak tailings pond. (Ex. S-4, Final SEC Form S-14 at pp. 51-56.) Union and Minerals valued all these other properties (not just the Ophir Properties) at a minimal amount (within the "rounding errors" of the uranium project appraisal). (Dep. Ex. 41; McCloskey Dep. at 49:2-50:4.)

B. The Terms of the 1978 Agreement: Union and Minerals Did Not Assume Silver Bell Liabilities.

21. The 1978 Agreement was carefully thought through. Both parties were represented by counsel – Silver Bell by the late Alec Keller of the Denver firm of Keller, McSwain, Wing & Maxfield and by Reardon, Reardon & Reardon (tax counsel); Union and Minerals by staff attorneys. Because of financial and accounting issues, both parties had qualified accountants involved – Coopers & Lybrand, Denver, for Silver Bell and Coopers & Lybrand, Los Angeles, for Union and Minerals. (Ex. S-4, Final SEC Form S-14; Ex. 516.)

22. The transaction and its closing were conducted openly and publicly. The nature of the transaction, which required transfer of 418,095 Union shares, required registration of the shares with the Securities and Exchange Commission. (Ex. S-4, Final SEC Form S-14; Ex. 517, various correspondence between counsel regarding draft SEC Form S-14.) The parties were required to file an SEC Form S-14 Registration Statement which presented in detail the

nature and terms of the transaction, the parties' businesses, the reasons for the transaction, its effects, and other matters. (Id.) That included the 1978 Agreement and copies of the parties' audits, financial statements, as well as other relevant information required under the federal securities laws. (Id.)

23. The 1978 Agreement carefully addresses the issue now before the Court – whether any Silver Bell liabilities would pass to Union or Minerals and, if so, which ones. The 1978 Agreement states Minerals would not be a successor to Silver Bell. Minerals would only be responsible for those obligations, if any, listed in the "Schedule of Obligations" that was to be attached to the Agreement as Exhibit 2. Silver Bell would be responsible for all contingent liabilities arising in connection with the transferred assets prior to the sale. Minerals would be responsible for contingent liabilities arising in connection with the transferred assets after the sale. (*Ex. S-3, 1978 Agreement at Article II, § 2.02.*)

24. It is important to recognize that PacifiCorp's Roanoak tailings pond was not an asset being transferred under this transaction. PacifiCorp, not Silver Bell, owned the Roanoak tailings pond. (*Ex. 501, Am. Compl. ¶ 13; Stip ¶¶ 6-9.*)

25. It appears that the parties never prepared an Exhibit 2, the Schedule of Obligations assumed, for their 1978 Agreement. At least at this time, 22 years after the fact, the parties have been unable to locate any copy of the 1978 Agreement with an Exhibit 2. (*Stip. ¶ 61.*) Nevertheless, there is a detailed contemporaneous written record of the parties' dealings. This record makes it clear that, except for very limited obligations that the parties clearly identified, Union and Minerals would not take on any of Silver Bell's liabilities. Specifically:

a. 1978 Agreement. In the 1978 Agreement, Union, Minerals and Silver Bell expressly addressed and allocated Silver Bell liabilities. Section 2.01B states that the consideration for the assets acquired by Minerals will include "the assumption by Minerals of certain specified obligations of Silver Bell." Section 2.02 states:

Minerals Not a Successor Corporation. When and if the transaction contemplated by this Agreement is consummated, *Minerals shall have only acquired the Assets of Silver Bell and shall not be considered as a successor corporation to Silver Bell;* provided, however, Minerals shall as of the time of closing execute and deliver to Silver Bell an instrument whereby Minerals assumes all of Silver Bell's obligations under all of those certain agreements listed in Schedule of Obligations, attached hereto as Exhibit 2 and by this reference made a part hereof for all purposes. Such instrument of assumption shall provide (subject to such exceptions as are set forth herein and shall be set forth in such instrument) that Minerals shall assume and indemnify Silver Bell against and hold it harmless from any and all obligations in connection with the Assets arising subsequent to the time of closing. Silver Bell shall remain liable for all obligations in connection with the Assets arising prior to the time of closing. Silver Bell shall remain liable for all obligations not listed in Exhibit 2 or otherwise assumed by Minerals including but not limited to obligations to shareholders, including dissenting shareholders.

(Ex. S-3, the 1978 Agreement at § 2.02 (bold in original, italics added).)

b. Letter of Intent. The Union – Minerals acquisition of Silver Bell assets started with a March 1978 Letter of Intent. This Letter of Intent mirrored the language in the final 1978 Agreement and provided "Silver Bell would continue to be liable for any and all obligations incurred or arising in connection with the assets or the operations thereof prior to the time of closing." Silver Bell also affirmatively represented that its assets were "free and clear of liens and encumbrances" and that there were no ongoing obligations which could not be avoided by a relinquishment of the properties, except as otherwise specifically provided in the definitive agreement. The Letter of Intent sets forth the liabilities that Minerals would specifically assume:

(1) the Sweetwater, Wyoming carried working interest (described in ¶s 30b, 45-47 below) and
(2) Silver Bell's obligation to acquire Mancos Corporation. (See Ex. 519, *Letter Regarding Intent To Acquire Silver Bell's Assets for Union Oil Company of California Stock* ("Letter of Intent").)
Neither of these is relevant here. (Silver Bell had previously agreed to acquire the assets of the Mancos Corporation. At the time of the 1978 Agreement with Silver Bell, Minerals entered into a separate agreement with Mancos to acquire the assets of Mancos for 6,905 shares of Union stock.)

c. May 1978 Correspondence. On May 5, 1978, shortly before the signing of the 1978 Agreement, Union's counsel Sam Snyder sent a fax to Silver Bell's counsel, Alec Keller, stating that his understanding of Exhibit 2 and Exhibit 3 is "that both will be none." (Ex. 520.) It also states that "i[f] the schedules to Exhibit one are still incomplete we can handle that by Letter Agreement at that time." (*Id.*) On May 8, 1978, Snyder sent a letter to Keller stating:

I am transmitting herewith Exhibits 1 and Exhibits 4 through 7. Exhibit 2 [the schedule of liabilities to be assumed], which is a Silver Bell Exhibit, will cross-reference Exhibit 1 so as to pick up the "carry" on the Sweetwater project as a burden on the property and not as a general obligation of Silver Bell.

(Ex. 521, *Letter from Snyder to Keller.*) On May 11, 1978, Keller responded to Snyder stating:

We have not executed the form of Exhibit 1 which I received today, even though basically we have no objection thereto. It does not provide for the assumption of Silver Bell's carried working interest obligation to Minerals Exploration Company nor the separate note. Paragraph f(3) provides that Minerals is to assume any and all of Silver Bell's obligations relating to rights and properties accruing subsequent to the effective date hereof. I think it should be made clear that the carried working interest obligation

under the Operating Agreement is assumed as well as the specific note obligation.

(Ex. 522 (emphasis in original).)

d. SEC Form S-14 Registration Statement. Between May and October 1978, counsel for Silver Bell and counsel for Union and Minerals exchanged correspondence regarding drafts of the Form S-14 Registration Statement that was required under the Securities Act of 1933 for the Union stock to be distributed in this transaction. (See, generally, Ex. S-4, Final SEC Form S-14; Ex. 517 (various correspondence exchanged by counsel).) This formal filing under federal securities laws outlined the terms of the transaction for the benefit of shareholders and the markets and provided a detailed description of the transaction. It included a Joint Proxy Statement for Silver Bell and the Mancos Corporation and additional information prepared for or by the parties as required by federal regulations. This stated that "[n]either Union nor Minerals will assume any obligations of Silver Bell except for obligations to Minerals in connection with the Sweetwater project and a promissory note" (Ex. S-4, Final SEC Form S-14 at p.1 ¶ 2.) That statement was finalized and filed with the SEC on October 13, 1978. (Id.)

e. Silver Bell Plan of Liquidation. Silver Bell adopted a plan for liquidation, distribution of shares, and dissolution of Silver Bell. This was described in the SEC Form S-14 Registration Statement discussed above. It also demonstrates that Silver Bell and Union intended that Silver Bell would retain liabilities. Specifically:

(i) Silver Bell was to cease active conduct of its business and liquidate, "less any assets retained or distributed to meet claims and liabilities." Annex 1 "Plan of Liquidation, Distribution of Shares and Dissolution of Silver Bell Industries, Inc., included by Unocal as part of S-14 Registration Statement.

(ii) The officers and directors of Silver Bell were authorized to "negotiate and consummate sales of all or any portion or portions of the properties of [Silver Bell] on such terms and conditions as they in their discretion shall deem beneficial to [Silver Bell] including the assumption by the purchaser or purchasers of any or all liabilities of Silver Bell.

(iii) All known or "ascertainable" liabilities of Silver Bell were to be promptly paid or provided for. "There may also be set aside and retained, in cash, securities, or other assets, a reserve fund in an amount estimated by the directors of the Company to be necessary for the payment of estimated expenses, taxes, and contingent liabilities."

(iv) The Directors could provide that the reserve fund was retained by a trustee.

(Ex. S-4, Final SEC Form S-14 at Annex I p. 1 ¶¶ 2-4.)

f. Other Correspondence. From May through November 1978, Union's counsel, David Hatfield, and Silver Bell's counsel, Alec Keller, exchanged various correspondence to straighten out issues with Silver Bell's assets. (Ex. 523.) None of the documents exchanged by the parties when drafting the 1978 Agreement or addressing issues between May and December mentions any liability that Silver Bell might have for the tailings pond located on PacifiCorp's property. In fact, Silver Bell represented in the SEC Form S-14 Registration Statement and its joint proxy statement that there were no such contingent liabilities. It stated:

Aside from the described obligations [obligations in connection with Sweetwater project and note payable to Mancos] and the obligation which will arise in connection with the completion of the sale of assets transaction described herein (see EXPENSES on Page 16 hereof), *Silver Bell has no known obligations.*

(Ex. S-4, Final SEC Form S-14 at p. 1 ¶ 2.)

26. Based on the 1978 Agreement itself and the contemporaneous written record, especially the SEC Form S-14 Registration Statement, it is absolutely clear that, by that contract, Minerals did not generally assume all of Silver Bell's liabilities. It assumed only specified liabilities, specifically (1) liabilities on the Sweetwater carried interest; (2) a promissory note payable to Mancos; and (3) obligations from the acquired assets after closing.

**IV. FACTS RELATING TO DEFACTO MERGER AND MERE CONTINUATION
EXCEPTIONS TO GENERAL RULE OF NO SUCCESSOR LIABILITY**

A. The Board of Directors, Officers, Management and Employees of Silver Bell Did Not Become Directors, Officers, Management or Employees of Minerals or Union.

27. After the effective date of the 1978 Agreement, December 15, 1978, none of the members of the Board of Directors of Silver Bell became members of the Boards of Directors of Union or Minerals or officers or employees of Union or Minerals. (*Stip.* ¶ 27.)

28. After the effective date of the 1978 Agreement, none of the officers of Silver Bell became officers of Union or Minerals or members of the Boards of Directors or employees of Union or Minerals. (*Stip.* ¶ 28.)

29. In December 1978, one former Silver Bell employee (Les Smith) was employed indirectly, through a temporary employment agency, by Union. Mr. Smith served as a caretaker of the abandoned Silver Bell mill site. He served in this capacity for less than two years. (*Stip.* ¶ 29.)

B. After the 1978 Asset Acquisition, Union and Minerals Did Not Continue the Operations of Silver Bell.

(1) Sweetwater Uranium Project.

30. The relationship and roles of Minerals as the 65% owner and as operator of the Sweetwater Project and Silver Bell as the 35% non-operating owner were controlled by a 1969 Operating Agreement, between Minerals and a Silver predecessor. (*Ex. S-26, Operating Agreement.*) Minerals, as the 65% owner, controlled operations subject to the Silver Bell rights discussed below. (*Ex. S-4, Final SEC Form S-14 at p. 47.*) The Operating Agreement provided, in relevant part:

a. Minerals had the obligation to plan and conduct exploration and development of the Project and to pay for its share of such activities.

b. The parties were to share all costs of exploration, development and production according to their then current proportionate ownership. (*Ex. S-26, Operating Agreement at pp. 6-7, 21-23 ¶¶ 3, 12.*) Silver Bell, the non-operating party, could agree "not to commit" to the project. Under that circumstance, the operator, Minerals, was required to advance Silver Bell's share of costs. These advances would not be repaid (i.e., would be "carried" by Minerals) until the project went into production. At that time, Minerals would be repaid with interest from 90% of the net revenue from Silver Bell's share of production. The remaining 10% of Silver Bell's production revenue would be retained by Silver Bell. (*Id. at pp. 21-23 ¶ 12.*) This type of arrangement is referred to in the mining industry as a "carried interest."

c. While Silver Bell was the non-operator, it was still entitled to be informed and consulted on project plans. Minerals, as the operator, was required to report to Silver Bell on ongoing plans and activities for the project, to seek Silver Bell's approval of certain plans, and to have Silver Bell determine whether it would commit or not commit to phases of the project. (*Id. at pp. 10-11 ¶ 4; pp. 16-17 ¶ 9.*)

d. In partial fulfillment of this obligation, Union and Silver Bell had formed a Technical Committee consisting of representatives of both parties. This Technical Committee met regularly. (*e.g.*, Ex. 524, 11th Technical Committee Meeting; Ex. 525, 12th Technical Committee Meeting; Ex. 526, 13th Technical Committee Meeting; Ex. 527, 14th Technical Committee Meeting.) At these meetings, Minerals would present plans and reports. The parties would discuss and evaluate them.

e. Silver Bell was responsible to market its 35% share of the production, and was entitled to receive (subject to its carried interest obligation) payment for that. (*Ex. S-26, Operating Agreement, pp. 27-29 ¶ 16.*)

31. At the closing under the 1978 Agreement, Silver Bell sold all its interest in the Sweetwater Project and assets. As a result, its separate, minority interest ceased to exist, the operator – non-operator distinction disappeared, and the Operating Agreement ceased to have any force and effect. Minerals, as the 100% owner of the Project, continued its role of planning and implementing exploration and development of the Project but as the 100% owner. It had no further obligation to report to, consult with, and hold technical committee meetings with Silver Bell or any other entity. Minerals was responsible for marketing all production and would receive all production revenue.

C. Union and Mineral Did Not Continue to Operate Silver Bell's non-Sweetwater Assets after the 1978 Agreement.

32. Immediately after the 1978 Agreement was executed, Union and Minerals sent geological and engineering staff to evaluate Silver Bell's non-Sweetwater properties. This evaluation included those properties located near Ophir, Colorado. (*Dep. Ex. 15, Silver Bell*

Industries Property Report.) The staff evaluated whether there was mineral potential in the Ophir Properties; defined what steps would be required to maintain those properties; and identified potential environmental, safety or other hazards that might be associated with those properties. (Ex. 528, *Memorandum from Lindsey to Buchella (indicating that Union was required to do assessment work to hold the Silver Bell properties from May 1978 until the closing of the 1978 transaction)*; Dep. Ex. 15, *Silver Bell Industries Property Report*; Dep. Ex. 19, *Memo from Gumble to Zinn*; Dep. Ex. 20, *Memo from Zinn to Gumble regarding Ophir Water Quality Samples*; Dep. Ex. 21, *Geological Report on Ophir, Colorado of 01/79*; Dep. Ex. 23, *Memo from Koestel and Gumble to Zinn*; Dep. Ex. 24, *Memo from Gumble and Koestel to Zinn ("An unfavorable geological setting augmented by a complex, problem riddled land status and potentially expensive environmental commitments make it advisable to relinquish this property as soon as possible.")*; Zinn Deposition at 18:17-19:2; 54:2-70:19; 73:17-75:17; 98:18-99:15; 119:7-25; 154:1-155:19 (Zinn explains that the geological staff evaluated the geological potential of the properties near Ophir and identified potential environmental and safety liabilities).)

33. Through this process, the geological staff determined that the Ophir Properties had no geologic potential, i.e., no ore deposits that could be developed into an economic mine, but did have a number of potential problems. (Id.) These included safety issues with open adits and shafts on mining properties, environmental issues including shafts discharging contaminated water, and other issues. (Id.) In this process, the staff learned that there was a tailings pond near the Silver Bell mill site and apparently was told by Silver Bell personnel that there was some form of agreement under which Silver Bell had agreed to stabilize

the tailings pond. (*Dep. Ex. 15, Silver Bell Industries Property Report.*) The staff noted that there were potential issues with the tailings pond, but made it clear they did not know whether those would be Minerals' responsibility. (*Id.*; *see also Dep. Exs. 18, 20, 24.*) The Geological staff wrote to Minerals' headquarters and legal staff in Los Angeles requesting advice on how to proceed with the Ophir Properties:

Reference is made to my memo (attached) of 11/8/78 to G.C. Dohm, Jr. [Dep. Exhibit 18], on the Ophir property consisting of 3 environmental and safety hazards for which Minerals Exploration Co. may be legally responsible. To my knowledge to date, consideration has yet to be given these hazards.

(*Dep. Exhibit 19, Memo from Zinn to All Interested Readers dated 11/16/78 (emphasis added); see also Dep. Exhibit 18, Memo from Zinn to Dohm ("Should Minerals Exploration Company acquire Silverbell, we then may be responsible for stabilization of the tails." (emphasis in original); Zinn Dep. at 73:17-75:17; 99:16-102:6 (Mr. Zinn reported to his superiors that they should evaluate potential liabilities).)*)

34. By February 1979, two months after the 1978 Transaction closed, Minerals' staff recommended dropping all the properties and interests acquired from Silver Bell in the Ophir area. (*Dep. Ex. 20.*) The Companies implemented this plan of disposition in three major steps:

a. By the Fall of 1979, less than a year after acquiring the Ophir holdings, Minerals surrendered many of the unpatented mining claims and mill site claims by not filing papers required under the federal mining laws to maintain those claims. (*Stip. ¶ 38 and exhibits cited there; Zinn Dep. at 155:20-158:25.*)

b. A major block of Silver Bell's Ophir Properties were held under an agreement between Silver Bell and an individual named Baumgartner dated May 30, 1970 in which Baumgartner conveyed certain mining claims and two major leases to Silver Bell. (*Stip. ¶¶ 41, 41a through 41c and exhibits cited there.*) This was an installment purchase under which Silver Bell was to make yearly payments on the claims and leases. (*Stip. ¶ 42a.*) On November 17, 1979, less than one year after the 1978 Transaction, Minerals decided not to make the annual installment payment and to terminate all rights under the Baumgartner purchase agreement. (*Stip. ¶ 45.*) Union sent Baumgartner a letter to that affect and included the \$100 termination payment required by the agreement. (*Stip. ¶ 45.*)

c. In early 1980, within fourteen months of the 1978 Transaction, Minerals offered for sale all remaining Ophir properties acquired from Silver Bell. (*Stip ¶ 46; Ex. S-57.*) Prospective buyers were provided the opportunity to inspect the properties and any relevant documents. (*S-57; Ex. 531, Letters from Rainey to Fleet.*) On November 13, 1980, Minerals and Molycorp, Inc. (another Union subsidiary that had acquired title to certain properties in the area) sold all the remaining Ophir Properties to Fleet Resources, Inc. for \$200,000. (*Stip. ¶ 47; Ex. S-58.*)

35. Thus, within two years of the closing of the 1978 Transaction, all the properties acquired from Silver Bell in the Ophir area had been dropped or sold. During that period, Union and Minerals had conducted no mining or milling operations on the properties acquired from Silver Bell and made no use of PacifiCorp's tailings pond.

D. Union and Mineral Did Not Take over the Physical Location and Management of Silver Bell.

36. The main business of Silver Bell was apparently the acquisition of interests in mineral properties and exploration of those directly or through others. (See *Ex. S-4, Final SEC Form S-14 at p. 6 ¶ 1; p. 47 ¶ 3* (SBI's operations were the "acquisition of interests in and to mineral properties and . . . exploration.")) Silver Bell conducted this business from its offices at 158 Fillmore Street, Denver. (*Ex. 532.*)

37. After acquiring Silver Bell's assets pursuant to the 1978 Agreement, Minerals did not takeover or use in any manner the Silver Bell office location. To the contrary, Mr. Eugene Sanders, who was Chairman, President and a major shareholder of Silver Bell (*see Ex. S-4, Final SEC Form S-14 at pp. 57-58*), apparently continued to manage Silver Bell (until November 1979) and other similar entities at that location after the 1978 Transaction.

38. Silver Bell had adopted a plan to dissolve following the sale of its assets. (*Ex. S-4, Final SEC Form S-14 at Annex I, p. 1.*) Silver Bell did not dissolve immediately, but waited until November 27, 1979, almost a year after the asset sale, to file its papers with the State of Colorado. (*Stip. ¶ 24.*) During that intervening period, Silver Bell continued to conduct its operations out of its Fillmore Street offices, just as it had before. (*Ex. 533, various tax documents for Silver Bell for 1979 and 1980.*)

39. A number of years earlier, Mr. Sanders had been involved in the creation of a corporation named Santier, Inc. (*Ex. 534, Secretary of State Corporate Filings of Santier, Inc.*) Santier Corp was a major shareholder of SBI. (*Ex. 535, Letter from Keller to Cole at pp. 1-2.*) On May 5, 1978 Santier, Inc. formally changed its registered office to 158 Fillmore Street

with Mr. Sanders as its registered agent. (*Ex. 536, Statement of Change for Santier, Inc.*)

Santier, Inc. apparently continued its existence until January 1, 1983. (*Ex. 534, Secretary of State Search Reply.*)

40. On June 29, 1980, Mr. Sanders created another corporation, Outwest Resources, Inc. (*Ex. 537, Articles of Incorporation for Outwest Resources.*) Outwest Resources continued until January 1, 1995 when it was administratively dissolved for failure to file a periodic report. (*Ex. 538, Secretary of State Search Reply.*)

41. In 1980, Sanders, doing business as Outwest Resources, entered into an option agreement with Minerals which provided that he could buy certain mining properties that Minerals purchased from the Mancos Corp. (*Stip. ¶¶ 50-52.*)

E. The Union-Silver Bell Transaction was Structured as a Tax-free Acquisition of Assets Under Section 368(a)(1)(C) of the Internal Revenue Code. This Structure Does Not Make the Transaction a De Facto Merger.

42. Minerals' 1978 acquisition of Silver Bell's assets was structured as a tax-free acquisition under Section 368(a)(1)(C) of the Internal Revenue Code (the "Code") because the Silver Bell shareholders wished to avoid double taxation on the proceeds from the sale of the assets. (*Stip. ¶ 17; Ex. S-4, Final SEC Form S-14 at p.7 ¶ 4, p .M912 (letter from Reardon to Silver Bell); Ex. 516.*) The Code provides that net operating losses are automatically transferred to an acquiring corporation in a transaction under § 368(a)(1)(C). See I.R.C. § 381(a)(2). Silver Bell did have net operating losses that passed in the transaction, but Union and affiliates never used these because of other provisions in the Tax Code. (*Stip. ¶ 17.*)

V. FACTS RELATING TO CLAIM OF FRAUD: (1) NO FRAUDULENT INTENT; (2) MINERALS PAID FAIR CONSIDERATION; AND (3) SILVER BELL HAD ASSETS TO PAY ITS LIABILITIES

A. Minerals' Intent: To Acquire Sweetwater Interest.

43. The reason for the 1978 transaction was that Silver Bell wanted to sell and Union and Minerals wanted to acquire Silver Bell's interest in the Sweetwater Project. In 1972, Silver Bell had acquired a 35% interest in uranium properties in Sweetwater County, Wyoming. Minerals owned the other 65%. (See *Ex. S-26, Operating Agreement; Stip. ¶ 31.*)

44. By the mid-1970s, Minerals, as the operator of the Sweetwater project, had conducted exploration and identified a substantial ore body on the Sweetwater properties. Minerals was planning and developing a full-scale mining and milling operation at this site. (*Ex. 539, Parsons Feasibility Report; Ex. 540, Application for Permit To Mine.*) This project was the driving force behind Minerals' 1978 asset acquisition of Silver Bell assets.

45. As described above (¶ 30b), Minerals was carrying Silver Bell's 35% share of the costs of the Sweetwater Project, i.e., Minerals would advance those costs, but would be repaid only out of a portion (90%) of Silver Bell's share of production. As of March 15, 1978, Minerals had advanced Silver Bell nearly \$12 million as Silver Bell's share of development costs for the Sweetwater Project. (*Ex. S-4, Final SEC Form S-14 at p. 3 ¶ 5; p. 48 ¶ 4; p. 50 ¶ 2; McCloskey Dep. at 24:21-25:7.*) Internal projections estimated that, assuming commercial production commenced in 1980, and assuming the project met targeted production and cash flow assumptions, Minerals would not obtain full repayment of Silver Bell's carried share of development costs before late 1984. If Minerals acquired the Silver Bell interest, it would be repaid the moneys advanced for Silver Bell more quickly, as 100% of the Silver Bell revenue (rather than the 90% allowed if Silver Bell continued as a minority interest owner) would be allocated to repayment. (*Id.*) At the same time, repayment of the carried interest obligation

would delay substantial returns to Silver Bell shareholders. Sale of the property would enable Silver Bell shareholders to obtain substantial value from this investment in the short term.

46. Minerals had additional reasons for wanting to acquire Silver Bell's share of the project. Under the Operating Agreement, each party was responsible to market its share of production. (*Ex. S-26, Operating Agreement at pp. 27-29 ¶ 16.*) By 1976, Minerals had entered into a long term contract with Public Service Co. of Indiana (PSI) that guaranteed Union a favorable return for 50% of the project production. (*Dep. Exhibit 34, Memo from McCloskey to Hartley; Ex. 541, Letter from PSI to McCloskey.*) PSI agreed to purchase one-half of the ore produced and to make advance payments on that production equal to half of the initial investment in the mine and mill up to \$21.5 million. (*Id.; McCloskey Dep. at 31:22-33:10; 23:23-24:10.*)

47. Silver Bell, however, was not doing well on marketing its share of production. Throughout the mid-1970's, Silver Bell had engaged in negotiations with a number of mining companies and with utilities, who were potential customers for uranium ore, in an attempt to sell its share of production and/or its interest in the project. (*Ex. 542, negotiation letters from various companies; McCloskey Dep. at 31:22-33:10; 38:5-39:4; 65:14-19.*) The most promising was Pacific Gas & Electric ("PG&E"). (*Ex. 543, Option Agreement; Ex. 544, letter and articles of incorporation; Ex. 545; Dep. Exs. 36, 37, 38, correspondence.*) As of 1978, Silver Bell had not entered into any sales agreements for its share of production. If Silver Bell was not able to market its share of production at a favorable price, Minerals' recovery of the carried interest payments would be jeopardized or delayed.

48. Finally, Silver Bell had conducted extended negotiations to sell its assets to PG&E. Such a sale would require approval from the California Public Utilities Commission. (*Ex. 545, Memo from Eakland to Brinegar.*) Approval by the PUC would delay any transaction for one to two years. This was unacceptable to Silver Bell shareholders and management. (*Ex. 545; Ex. 546, Letter from President of SBI to shareholders.*) From Minerals' perspective, the delay, with the associated risk that Minerals would have as its venture partner a regulated utility, caused serious concerns. (*Ex. 547; Ex. 548, at p. M1047; Ex. 549; Dep. Ex. 41; Dep. Ex. 61; Sleeman Dep. at 34:17-35:12.*) All these issues provided both Minerals and Silver Bell sound business reasons for a purchase/sale of the Silver Bell 35% interest.

B. Minerals Paid Fair Value for Silver Bell Assets.

49. Pursuant to the 1978 Agreement, the consideration paid to Silver Bell for the sale of its assets was 418,095 shares of Union common stock and assumption of limited, specified liabilities. (*Stip. ¶ 15.*) The 418,095 shares constituted fewer than 1% of the total outstanding shares of Union. (*See, Stip. ¶ 18; Ex. S-6.*) As of May 15, 1978, that stock sold at approximately \$50 per share, making this a \$21 million transaction. (*Stip. ¶ 16.*) The price of the shares increased from May to December, and the price used under the 1978 Agreement for payment of fractional share interests (the average price for Union common stock for the ten days prior to December 5, 1978) was \$56.20. (*Stip. ¶ 19.*) This meant that as of the closing of the 1978 Transaction, Silver Bell actually received approximately \$23.5 million in stock for the sale of its assets. (*Id.*) The preliminary prospectus stated that the Union stock offer was "the best offer received by Silver Bell in the more than two years of negotiations with many companies." (*Ex. S-4, Final SEC Form S-4 at p. M751 (letter from Sanders to Silver Bell Shareholders).*)

50. Union and Minerals had prepared a series of appraisals of Silver Bell's assets prior to the 1978 Agreement. These focused principally on Sweetwater, but included the other assets. These appraisals reflected a value for Silver Bell's assets in the range of \$20 million. This was consistent with what other companies were offering Silver Bell for the assets. *(Dep. Ex. 38, Memo from McCloskey to Brinegar (evaluating pros and cons of PG&E's offer for and appraisal of Silver Bell); Dep. Ex. 39, Memo from McCloskey to Brinegar (appraising Silver Bell at 19.5 million); Dep. Ex. 41, Memo from McCloskey to Brinegar (explaining that \$18.7 million was a reasonable offer for Silver Bell); Dep. Ex. 43, Memo from Sleeman to Hartley (analyzing Silver Bell's offer to sell for 450,000 shares of Union); Dep. Ex. 47, Memo from Eakland to Brinegar (Union had only a few days to act before Silver Bell received an acceptable offer from another company); McCloskey Dep. at 27:21-29:22; 49:2-50:4; 63:16-64:22.)*

51. Under the terms of the 1978 Transaction, Silver Bell was required to pay its outstanding liabilities, obligations and expenses. Those obligations and expenses would be paid from cash on hand, which Silver Bell did not sell to Union, and from cash generated from the sale of sufficient Union shares to cover the liabilities. The SEC S-14 Registration Form estimated that 4,000 shares, worth more than \$200,000 would be sold to meet Silver Bell liabilities as payment for these obligations. *(Ex. S-4, Final SEC Form S-14 at p. 8.)* The S-14 Registration Statement expressly stated that if those estimates proved low, more stock would have to be sold. *(Id.)*

52. Silver Bell assets were available to pay its liabilities for a substantial period after the December 1978 closing. After the closing and after Silver Bell had attended to certain other matters, Silver Bell shareholders would be entitled to surrender their Silver Bell

shares to be exchanged for Union shares. (*Ex. S-4, Final SEC Form S-14 at pp. 8, 46.*) The directors of Silver Bell held approximately 8.2% of the shares of the company, which would have had a value of almost \$2 million as of the date of the closing. (*Ex. S-4, Final SEC Form S-14 at pp. 57-58.*) The largest single shareholder (Consolidated Oil and Gas) held 11.2% of the stock, which would have been in excess of \$2.5 million. (*Id.*) Any Union shares unclaimed as of the date of Silver Bell's dissolution and liquidation would be sold and the proceeds sent to the Treasurer of the State of Colorado under Colorado's escheat statute. Shareholders who had not exchanged their Silver Bell shares prior to that time could make claims against the funds held by the Treasurer. (*Stip. ¶ 22.*) Under this provision, United Bank, which served as transfer agent for Silver Bell, transferred approximately one million dollars to the State Treasurer in late 1979. (*Stip. ¶ 23a; Ex. S-8; Ex. S-9.*) This money could be reached by Silver Bell's creditors.

VI. FACTS RELATED TO 1976 NPDES PERMIT

53. In 1976, the Colorado Department of Health ("the State") issued National Pollutant Discharge Elimination System ("NPDES") Permit No. CO-0000108 to Silver Bell. This allowed Silver Bell to discharge water from what the permit described as "wastewater treatment facilities" for Silver Bell's milling operations. (*Ex. 550, NPDES Permit issued to Silver Bell.*) The permit authorized discharge of water from two outfall points on the Roanoak tailings pond to the adjacent river. The permit set effluent limitations for the discharge. (*Ex. 551, Summary of Rationale for NPDES Permit.*)

54. The permit also contained a number of requirements relating to reports, operations, and other matters. These included a Termination of Operations requirement ("Termination Requirement"). (*Ex. 550 at p. 13.*) This Termination Requirement provided that

Silver Bell should conduct a study of the control of all discharges to the river from Silver Bell's operations. The study was to be submitted by December 31, 1977. It was to include a plan for the elimination of such discharges after the termination of Silver Bell's operations and a schedule for implementation of that plan. The implementation schedule was to have all work completed within two years of the termination of Silver Bell's operations. (*Ex. 550 at p. 13.*)

55. On December 29, 1977, Silver Bell sent the required plan to the State. (*Ex. 552.*) That plan called for the construction of surface runoff diversion structures to divert surface water that would run onto portions of the tailings pond, plugging of decant structures on the pond, and planting of cover vegetation in certain areas. The plan stated that the work would be completed by October 1978. (*Id.*) Silver Bell did not do the work.

56. Silver Bell continued as the permittee on the NPDES permit at least into March 1980. In November 1979, Molycorp Inc., which, as indicated below, had filed papers to claim a new Silver Bell mill site in the general area of the old site, began to investigate issues with the permit. On November 29, 1979, Molycorp requested from the State an application to transfer the NPDES permit from Silver Bell to Molycorp.² (*Ex. 553.*)

57. It appears that, by a letter from the State dated on November 30, 1979, Molycorp received a copy of the NPDES permit issued to Silver Bell. The letter stated that the State would issue a permit to Molycorp if Molycorp would submit a signed application. One

²Molycorp is not a defendant in this action. No claim is pleaded against Molycorp or that Union and Minerals have liability for Molycorp's actions. By including facts relating to Molycorp, the Defendants do not waive their objection to consideration of any claims against Defendants based on Molycorp actions. As indicated in Sec. VI of this brief below, Defendants will file a separate motion to strike all Molycorp issues.

form of application would be an application for transfer of the permit. On receipt of that, the State stated it would issue a permit to MolyCorp. (*Ex. 554.*)

58. On March 10, 1980, MolyCorp executed an "Application For Transfer And Acceptance Of Terms Of NPDES Permit." (*Stip. ¶ 58; Ex. S-73.*) The Parties have not located any document that indicates that the State finally issued the permit in MolyCorp's name, but MolyCorp did apparently deal with the State after March 1980 on various issues.

59. The application for transfer of the NPDES permit stated that MolyCorp was the owner of the mill and tailings pond. As to ownership of the mill, MolyCorp had claimed ownership of a new mill site in approximately the area of the old Silver Bell mill site shortly before that date. (*See ¶ 61 below.*) As to the tailings pond, that statement was not correct. MolyCorp (as well as Union and Minerals) was not then and never had been the owner of the Roanoke tailings pond. As PacifiCorp admits, PacifiCorp and its predecessors owned the tailings pond at all relevant times prior to 1991. (*Stips. ¶¶ 7-9.*)

60. MolyCorp staff subsequently evaluated what steps would be required if it had to reclaim the tailings pond, and the cost of that work. (*Ex. 515; Ex. 555; Ex. 556; Ex. 557.*) The conclusion was that the cost of reclamation would be in the range of \$110,000-125,000. (*Id.*)

61. Minerals had allowed its rights to certain unpatented mining claims in the Ophir area to lapse in 1979. (*Stip. ¶ 38 and exhibits cited there.*) Two claims that lapsed were the Silver Bell mill site and the Butler mill site. On March 10, 1980, MolyCorp, Inc. filed and recorded a Notice of Location for a new Silver Bell mill site and Butler mill site that it had claimed in the same vicinity as the prior claims. (*Stip. ¶ 39 and exhibits cited there.*)

62. As stated above, in November 1980, Minerals and Molycorp sold to Fleet Resources all remaining properties in the Ophir area associated with the 1978 Transaction. This included the Silver Bell mill site as claimed by Molycorp in March 1980. Fleet Resources was specifically provided a copy of the NPDES permit. (*Stip. ¶ 59; Ex. S-74; Ex. 531, Letter from Rainey to Fleet.*)

63. Fleet then went through the same process with the State as Molycorp had earlier for transfer of the NPDES Permit. Fleet filed an Application for Transfer and Acceptance of Terms with the State in December 1980. (*Stip. ¶ 59; Ex. S-74.*) The State formally re-issued the permit to Fleet. (*Ex. 558; Ex. 560, NPDES Permit Issued to Fleet; Ex. S-74, Fleet's Application for Transfer.*) Thus, if Molycorp's March 1980 application had resulted in the permit issuing to it, Molycorp was the permittee for no more than nine months, from March to December 1980. (*Compare Ex. S-73, Molycorp's Application for Transfer to Ex. S-74 signed 3/10/80, Fleet's Application for Transfer signed 12/4/80.*)

64. The 1976 NPDES permit expired in 1981. Fleet renewed the permit as of November 15, 1982. (*Ex. 561; Ex. 562.*) In the renewal, the State dropped the Termination Requirement and any requirement for reclaiming the tailings pond when operations ceased. (*Compare Ex. 560, the 1976 NPDES Permit, to Ex. 561, the 1982 NPDES Permit.*) Fleet and its successors at the site obtained further renewals of this permit in 1983, 1987, and 1996. (*See Ex. 563; Ex. 564; Ex. 565; Ex. 566; Ex. 567.*) None of those renewals included any term comparable to the Termination Requirement. (*See id.*)

65. The State did not issue a notice of violation to Silver Bell, Molycorp or Fleet for any claimed failure to comply with the Termination Requirement. (*See Ex. 505,*

Plaintiff's Response to Defendant's First Set of Requests For Admissions, at pp. 4-5, Response Nos. 1-2.) The State permit files contain no discussion of the termination plan as filed by Silver Bell in 1977 or of any issues with the Termination Requirement.

VII. IN 1991, PACIFICORP SOLD THE ROANOAK PLACER TO THE WYNNEs

66. In 1991, PacifiCorp sold its Roanoak placer mining claim, with the tailings pond, to Edwin and Camilia Wynne for commercial purposes. The Wynnes apparently planned to construct a hydroelectric power plant on the site. (*Ex. 569, Special Warranty Deed.*) PacifiCorp asserts that it did not indemnify the Wynnes for any liability arising from the tailings pond. (*Ex. 508, Letter from Randall to Douthit at p. 2.*) PacifiCorp did, however, conduct an environmental investigation of the property in 1990 prior to the sale to the Wynnes. (*Ex. 570, JBR Consultants Group Study prepared for Jeff Tucker of PacifiCorp; Ex. 571, Memo ("the assessment of the environmental issues is not complete, nor have the Colorado Mine Reclamation Regulations been reviewed. Also, Colorado has its own 'Superfund Law' which may affect liability issues at this property."); Ex. 569, Special Warranty Deed ("Grantee is aware of the environmental analysis performed by Grantor on the property and of its findings.")*.) About four years ago, the Wynnes sold approximately half of the Roanoak Placer to a company known as the San Joaquin Partners for about \$200,000. (*Stip. ¶ 9.*) The Wynnes' remaining half of the Roanoak Placer is now on the market for \$1,100,000 dollars. (*Id.*) PacifiCorp has not sued the Wynnes in this contribution action. Obviously, as owners of the tailings pond from 1991-present, they would have some level of contribution liability.

VIII. PACIFICORP SUBMITS VOLUNTARY CLEANUP APPLICATION

67. In May 1999, PacifiCorp and the Wynnes filed a Voluntary Cleanup and Redevelopment Act Application for the Silver Bell Tailings Impoundment Ophir, Colorado ("VCUP") with the Colorado Department of Public Health and Environment. (*Ex. 572; Ex. 502 at 4 (indicating the Wynnes are co-applicants.)*) In February 2000, PacifiCorp filed a revised VCUP application. (*Ex. 573.*) In 1999, before the VCUP was approved, PacifiCorp apparently began to conduct remedial work on the Roanoak tailings pond pursuant to its unapproved VCUP. (*Ex. 501, Amended Complaint ¶¶ 32-35; Ex. 502 at p. 5 ¶ III.*) The VCUP was not approved until July 20, 2000, by which time most of the work was done. (*Ex. 574.*)

I. GENERAL RULE

ARGUMENT

I. AS A PURCHASER OF SILVER BELL ASSETS, UNION AND MINERALS DID NOT ACQUIRE LIABILITIES UNLESS ONE OF THE FOUR EXCEPTIONS TO THE NO SUCCESSOR LIABILITY RULE APPLIES. PACIFICORP CANNOT ESTABLISH THAT ANY EXCEPTION APPLIES.

In 1978, Minerals and Union entered into a routine asset purchase transaction with Silver Bell Industries. Minerals purchased substantially all the assets of Silver Bell for approximately \$23.5 million in Union stock. It is uniform, black letter law that in such an asset purchase transaction, the purchaser does not acquire the liabilities of the seller unless one of four narrow exceptions to that rule applies:

1. the purchaser expressly or impliedly agrees to assume the disputed obligation;
2. the transaction is a de facto merger;
3. the purchasing corporation is a mere continuation of the selling corporation;
4. the transaction is fraudulently entered into to escape the liability asserted.

See, e.g., Fletcher, CYCLOPAEDIA OF THE LAW OF PRIVATE CORPORATIONS, § 7122 (Rev. ed. 1990); *Florum v. Elliott Mfg.*, 867 F.2d 570, 574-79 (10th Cir. 1989) (applying Colorado law); *Johnston v. Amsted Indus. Inc.* 830 P.2d 1141, 1142-43 (Colo. App. 1992) (states general rule and four traditional exceptions); *Ruiz v. ExCello Corp.*, 653 P.2d 415, 416 (Colo. App. 1982) (same).

The issue of corporate successor liability in this CERCLA contribution action should be decided according to Colorado law. See *United States v. Bestfoods*, 524 U.S. 51, 62-64, 118 S.

Ct. 1876, 1885-86 (1998) (CERCLA gives no indication that the entire body of "state corporation law is to be replaced simply because a plaintiff's cause of action is based on federal statute" - dictum); United States v. Hardage, 985 F.2d 1427, 1433 n.2 (10th Cir. 1993) (because CERCLA contribution proceeding does not affect government interests, state law will govern). A number of federal courts previously held that they should develop a federal common law of corporate successor liability under CERCLA. E.g., Louisiana-Pacific Corp. v. ASARCO, Inc., 909 F.2d 1260, 1262-63 (9th Cir.1990). Courts have retreated from that position in recent years and recognized that state law, not federal common law, should be the basis for deciding this basic issue of corporate law in CERCLA cases. Atchison, Topeka and Santa Fe Ry. Co. v. Brown & Bryant, Inc., 159 F.3d 358, 361-64 (9th Cir. 1997) (overruling earlier Ninth Circuit decision in Louisiana-Pacific case, citing Atherton v. FDIC, 519 U.S. 213 (1987) and O'Melveny & Myers v. FDIC, 512 U.S. 79 (1994) for the rule that state law should be supplemented by federal rules of decision "only in few and restricted instances"); see also Bestfoods, supra. This change should not affect the outcome of this case. Except for those courts that adopted a fifth exception to the no successor liability rule³, courts have found federal and state law essentially the same on

³One reason some earlier decisions resorted to a federal common law was to recognize a fifth exception to the black-letter rule that an asset purchaser does not acquire liabilities, i.e., the "substantial continuity" or "continuity of enterprise" theory. E.g., U.S. v. Carolina Transformer, 978 F.2d 832, 838 (4th Cir. 1992). This theory is a liberalized version of the traditional mere continuation and de facto merger exceptions. But a perceived need for more advantageous law is an insufficient reason to reject state law. See Atchison, 159 F.3d at 364; Bestfoods, supra. Colorado has expressly rejected an extension of the standard exceptions to adopt the substantial continuity rule as a new exception to the general rule of no successor liability. Johnston, 830 P.2d at 1146-47; Florum, 867 F.2d at 579-81. PacifiCorp is not asserting that exception in this case. (Interrog. Resp. Nos. 1, 2; Supplemental Interrog. Resp. No. 2; letter from Randall to Lane of 09/07/00. (Exs. 503, 504, 506, 507).)

issues of corporate successor liability, and have decided the issue on well established principles of corporate law. Atchison, 159 F.2d at 364 ("Fortunately, we need not determine whether state law dictates the parameters of successor liability under CERCLA, as we would reach the same result under federal common law."). Accordingly, while relying primarily on Colorado law, this brief will cite federal cases applying the standard rules of corporate successor liability in CERCLA cases.

The four exceptions are addressed in Sections II through V of this brief. As will become readily apparent, PacifiCorp has not shown and cannot show that any of those exceptions applies under the facts of this case.

II. ASSUMPTION

II. THE 1978 AGREEMENT IS CLEAR THAT UNION DID NOT ASSUME ANY SILVER BELL LIABILITY TO REMEDIATE PACIFICORP'S TAILINGS POND. EXCEPTION 1 TO THE NO SUCCESSOR LIABILITY RULE DOES NOT APPLY.

PacifiCorp claims that Union and Minerals have liability as successors to Silver Bell because they assumed such liability as part of the 1978 asset purchase agreement. This claim is to be determined as a straightforward matter of contract law. The Court must look to the parties' agreement. To prove this claim, PacifiCorp must show that, under the terms of the 1978 Agreement, the parties agreed that Union and/or Minerals would assume whatever liability Silver Bell had for remediating PacifiCorp's tailings pond. PacifiCorp can prove this in two ways: (1) PacifiCorp can prove a general assumption, i.e., that Union or Minerals contracted to assume all Silver Bell liabilities; or (2) PacifiCorp can prove a specific assumption, i.e., that they contracted to assume this specific liability or a specific category of liabilities that included some Silver Bell obligation to clean up PacifiCorp's tailings.

This is very significant for PacifiCorp's claim that the assumption exception to the no successor liability rule applies. Since there was no general assumption of liabilities, PacifiCorp must identify a specific claimed liability of Silver Bell and show how that was assumed under the specific terms of the 1978 Agreement. Unlike the defacto merger and mere continuation exceptions, which conceptually would pass all liabilities to a buyer of assets, the claim of an assumption must be proven for a specified liability. Thus, applying this rule in the context of this action, PacifiCorp's Amended Complaint asserts two primary bases for Silver Bell liability at this Site: (1) statutory liability under CERCLA; and (2) a 1970 Agreement between Silver Bell and PacifiCorp that allowed Silver Bell to use the Roanoak tailings pond but included certain

Silver Bell contractual obligations associated with such use. (Ex. 501, Amended Complaint, generally.) (The Amended Complaint also includes some tort theories that are subject to pending motions to dismiss.) PacifiCorp must show that the 1978 Agreement includes some term under which Union and Minerals specifically agreed to assume liability under a statute that didn't exist (CERCLA was not enacted until 1980, two years after the 1978 Agreement) or under the 1970 Agreement. PacifiCorp cannot prove either.⁴

The following sections of this argument will show that:

1. As a matter of law, to establish an express assumption of liabilities, PacifiCorp is required to show clear contract language showing the parties intended an assumption of the liability now asserted (Section II.A);
2. The language of the 1978 Agreement is clear and unambiguous that Union did *not* make a general assumption of Silver Bell liabilities (Section II.B);
3. No provision of the 1978 Agreement can be read to expressly assume any specific liability for PacifiCorp's tailings pond (Section II.C);
4. PacifiCorp may not assert implied assumption because there is clear contract language of non-assumption of liabilities. But if it could, there is no conduct from which the Court can imply an assumption of liability for PacifiCorp's tailings pond. (Section II.D)

⁴This brief will discuss assumption of Silver Bell liabilities without (for the most part) addressing the issue of whether, in fact, Silver Bell had or has the specific liability PacifiCorp identifies, or whether such liability would include tailings pond remediation. Those issues are for determination in Phase 2.

A. The Law Requires That An Express Assumption Must Be Clearly Shown By The Parties' Contract.

The determination whether Union or Minerals assumed any Silver Bell liabilities under the 1978 Agreement is a matter of interpretation of that contract. In construing that contract, it is axiomatic that the Court's function is to determine and give effect to the intent of the parties. USI Properties East, Inc. v. Simpson, 938 P.2d 168, 173 (Colo. 1997); Cache National Bank v. Lusher, 882 P.2d 952, 957 (Colo. 1994). That intent is to be determined primarily from the document itself. When the language of the parties is clear, that clear language must be given effect by the Court. Cache National Bank, 882 P.2d at 957; KN Energy, Inc. v. The Great Western Sugar Co., 698 P.2d 769, 776 (Colo. 1985), cert. denied, 472 U.S. 1022. Before finding an assumption of liabilities, the Court should look for clear and unambiguous contract language. FLETCHER, § 7114 at p. 200 ("the agreement must be clear and unambiguous in order for it to amount to an assumption"). Applying this basic standard, the following section will show that language of the 1978 Agreement did not include any general assumption of contract liabilities.

B. The Language Of The 1978 Asset Purchase Agreement Was Clear That There Was No Express General Assumption Of Liabilities.

In the 1978 Agreement, Union, Minerals and Silver Bell expressly addressed and allocated Silver Bell liabilities. Their express language makes it crystal clear that there was not an express general assumption of Silver Bell liabilities.

Section 2.01B of the Agreement states that the consideration for the assets acquired by Minerals will include "the assumption by Minerals of certain specified obligations of Silver Bell." (Emphasis added.) Section 2.02 states: "**Minerals Not A Successor Corporation.** When and if the transaction contemplated by this Agreement is consummated, Minerals shall

have only acquired the Assets of Silver Bell and shall not be considered as a successor corporation to Silver Bell." (Facts ¶¶ 17, 23, 25a (emphasis in original).)⁵

Section 2.02 identified the liabilities that would be assumed: (1) those obligations listed in Exhibit 2 to the Agreement and (2) obligations in connection with the assets acquired arising after closing. (Facts ¶¶ 23, 24, 25a.)

As the starting point for the analysis of PacifiCorp's argument that the assumption exception to the no successor liability rule applies here, this express language of the 1978 Agreement absolutely precludes the Court from finding that Minerals or Union generally assumed all Silver Bell liabilities in the 1978 Agreement. The parties' explicit language unequivocally states otherwise. Florum v. Elliot Mfg., 867 F.2d 570, 574-75 (10th Cir. 1989) ("An unambiguous contract between the seller and purchaser corporations, with explicit provisions which exclude any liability for the debts and liabilities of the predecessor, weighs against our finding that an exception can be implied."); see also John S. Boyd Co. v. Boston Gas Co., 992 F.2d 401, 406-407 (1st Cir. 1993) (the clear language of the agreement is conclusive); United States v. Vermont American Corp., 871 F.Supp. 318, 320-321 (W.D. Mich. 1994) (clear language setting forth the specific liabilities that the buyer assumed bars a finding that the buyer assumed CERCLA liability). Accordingly, unless PacifiCorp can show that the liability to clean up its tailings pond arises from the express language of the 1978 Agreement, i.e., that it was included in Exhibit 2 or arose from the purchased assets subsequent to the closing, its assumption argument fails.

⁵The Argument section of Defendants' Trial Brief cites to "Facts." These citations are to the specified paragraph number set forth in the section of the brief entitled, "Statement of Facts."

C. The Obligation To Remediate The Tailings Pond Was not Included In The Liabilities Assumed In The 1978 Agreement.

The 1978 Agreement stated that Minerals would assume only two categories of Silver Bell liabilities: (1) those included in Exhibit 2, the Schedule of Obligations; and (2) obligations in connection with the assets arising subsequent to closing. The remediation of PacifiCorp's tailings pond is not included within either category of liabilities.

1. Exhibit 2, the Schedule of Obligations to the 1978 Agreement, Did Not Include Any Liability For PacifiCorp's Tailings Pond.

There is some confusion with respect to Exhibit 2, the Schedule of Obligations to the 1978 Agreement. As far as anyone can determine at this time, the parties never prepared an Exhibit 2. In this situation, there is an ambiguity in the document itself as to what the parties intended Exhibit 2 to include. But that ambiguity is easily resolved under basic principles of contract interpretation. One of the most reliable indicators of the parties' intent is their interpretation of the contract prior to any controversy arising. Blecker v. Kofoed, 672 P.2d 526, 528 (Colo. 1983), remanded and aff'd after remand, 714 P.2d 909 (Colo. 1986); Tucker v. Ellhogen, 793 P.2d 592, 596 (Colo. App. 1989). In this case, there is a clear, contemporaneous written record of exchanges between the parties and in official filings submitted by both parties to the Securities and Exchange Commission immediately prior to and after signing the 1978 Agreement. That record shows beyond any dispute that the parties did not intend to include in Exhibit 2 the liability now asserted.

The contemporaneous written record is described and quoted in detail in paragraphs 25a through 25f of the Statement of Facts above. That record begins with the parties' letter of intent executed in March 1978, and includes correspondence between counsel leading up

to the May 1978 Agreement, a Form S-14 Registration Statement filed with the Securities and Exchange Commission under the Securities Act of 1993, Silver Bell's plan of liquidation, and other documents. Collectively, those documents make it clear that Exhibit 2 to the 1978 Agreement would include only two liabilities: (1) the carried working interest obligation associated with the Sweetwater Project; and (2) a promissory note in connection with the Mancos transaction.

There is no reference in the 1978 Agreement or the contemporaneous written record of the parties' intent that Exhibit 2, the Schedule of Obligations to be assumed, would include any environmental liability, much less a specific obligation to remediate PacifiCorp's tailings pond. Accordingly, Minerals and Union did not assume any tailings pond liability through Exhibit 2.

2. The PacifiCorp Tailings Pond Was Not Included In "Obligations In Connection With The Assets" Arising After Closing.

Under § 2.02 of the 1978 Agreement, Minerals agreed to assume "obligations in connection with the Assets arising subsequent to the time of closing." (Facts ¶ 25a; Ex. S-3.) Plainly, this could not include any liability for the PacifiCorp tailings pond because it was not an "Asset" acquired under the terms of the Agreement. The assets that Minerals acquired were Silver Bell properties. Silver Bell did not own the tailings pond that is the subject of this action. PacifiCorp's Amended Complaint pleads and PacifiCorp admits that it owned the tailings pond from 1913 to 1991. (Facts ¶ 6.) There is and can be no claim here that Minerals acquired the tailings pond in the 1978 Transaction with Silver Bell. Since the tailings pond is not one of the

assets acquired under the 1978 Agreement, neither Minerals nor Union acquired any liabilities, pre or post closing, with respect to it.

Furthermore, even if the liability of Silver Bell for PacifiCorp's tailings pond were deemed to be "in connection with the Assets", it would not have been a liability "arising subsequent to the time of closing." PacifiCorp has expressly pleaded and asserts in discovery that the Silver Bell liability it asserts Minerals and Union succeeded to derives from the liability for the tailings pond that arose prior to the closing.

Specifically, PacifiCorp asserts that Union and Minerals succeeded to Silver Bell's obligation under a 1970 Agreement to stabilize the tailings pond. (Amended Complaint ¶¶ 67-74.) According to the 1970 Agreement, the obligation to stabilize the tailings pond arose when Silver Bell ceased operations. (Facts ¶ 11.) According to PacifiCorp, Silver Bell "abandoned" its milling operations and the tailing pond. (Facts ¶ 10.) Thus, Silver Bell's liability under the 1970 Agreement arose in 1975 – three years before closing.

PacifiCorp also asserts that Union assumed Silver Bell's obligation to perform reclamation under the 1976 NPDES permit. Defendants object that this issue is not pleaded and is not properly before the Court. (See Section VI of this brief below.) Without waiving that objection, Defendants note that the permit obligation also arose prior to the closing. By the terms of the NPDES permit requirement, Silver Bell's plan should have been implemented within 2 years of Silver Bell terminating its operations. (Facts ¶ 55.) According to the PacifiCorp's complaint, operations terminated in 1975. (Facts ¶ 10; Ex. 501, Amended Complaint ¶ 24.) Therefore all work under this requirement should have been completed by late 1977. Silver Bell did not file its plan to do the required work until December 1977, which probably put it in breach

of the requirement as of that time. (Facts ¶ 55.) Silver Bell committed in its filing with the State that the work would be completed by October 1978. (*Id.*) Silver Bell did not do the work.

(Facts ¶ 55.) The 1978 Agreement closed in December 1978. (Facts ¶ 18.) Clearly Silver Bell's permit obligation pre-dated the closing. By the express terms of the 1978 Agreement, Silver Bell kept liability for obligations arising prior to closing for the tailings pond and its remediation.

(Facts ¶¶ 23, 24, 25a.)

This Section shows that, by the terms of the 1978 Agreement, Minerals and Union did not expressly assume Silver Bell liability, if any, for tailings pond remediation. The 1978 Agreement clearly defines the categories of liabilities assumed. The liability asserted here is not included.

D. Minerals And Union Did Not Impliedly Assume Any Silver Bell Liability For Tailings Pond Remediation.

1. The Law: PacifiCorp Cannot Assert Implied Assumption In Derogation Of The Clear Contract Language.

As a matter of law, PacifiCorp should not be able even to introduce evidence that Minerals assumed any successor liability under the "implied assumption" exception where, as here, there is explicit contractual language that rejects such liability. Where there is an express disclaimer in the purchase agreement to the contrary, the seller does not impliedly agree to assume the selling business's debts or liabilities. Johnston v. Amsted, 830 P.2d 1141, 1143 (Colo. App. 1992). Contract interpretation is a matter of the parties' intent. The court must first look to the language of the agreement. If that is clear, the court should not look to secondary evidence of intent to contradict that language. Dorman v. Petrol Aspen, Inc., 914 P.2d 909, 911 (Colo. 1996) ("When a document is unambiguous, it cannot be varied by extrinsic evidence.");

O'Reilly v. Physicians Mut. Ins. Co., 992 P.2d 644, 647 (Colo. App. 1999)(clear written agreements are to be enforced as written). See also City Management Corp. v. U.S. Chemical Co., 43 F.3d 244 (6th Cir. 1994). In that case, the Sixth Circuit refused even to review the parties' conduct on a claim of implied assumption of liability because there was an express provision limiting liabilities assumed. The Court stated:

In this case, the Agreement expressly provided that plaintiff's assumption of hazardous waste contamination liabilities was limited to those connected with the . . . property. **In the face of contractual language that expressly disclaims liability, we cannot find that there was an implied assumption of liability**, and we need not consider the argument that plaintiff's conduct manifested an intent to assume such liability.

43 F.3d at 256 (emphasis added).

2. Even If The Law Allowed It To Do So, PacifiCorp Can Show No Conduct From Which The Court Can Imply That Union Or Minerals Intended To Assume Any Silver Bell Environmental Liabilities.

The language of the parties' agreement is clear that the liabilities now asserted were not assumed. Under these circumstances, PacifiCorp's position here must be that somehow, by its conduct post-1978, Union demonstrated an intent to assume either all Silver Bell environmental liabilities or those associated with PacifiCorp's tailings pond. Even if the law allowed consideration of such conduct to negate the language of the Agreement, the record contains no such evidence.

The record does show that, after the 1978 Agreement was signed, Union and Minerals undertook a review and evaluation of the non-Sweetwater properties that were to be acquired from Silver Bell. This included an evaluation of the properties in the Ophir area. That factual record shows that Union geologists and engineers visited the area, inspected the

properties and prepared reports on their geologic potential and on potential liabilities associated with those properties. (Facts ¶¶ 32-33.) The staff concluded the properties had little potential for development of an economic ore body. (Id.) The staff also identified a number of matters as *potential* liabilities for which Minerals might be liable if Minerals acquired the properties. (Id.) These included mining shafts not adequately protected against tourist trespassers, adits discharging possibly contaminated water, and issues with the Roanoak tailings pond. (Id.) The staff apparently were told by Silver Bell onsite personnel that Silver Bell had agreed to stabilize the tailings area, and recognized that this could be a potential liability that the company might inherit. (Facts ¶ 33.) But the documents show no contract review, no title analysis, no legal evaluation of whether in fact such liabilities would transfer to Minerals as the acquiring company, and no action by Union or Minerals to assume any of those Silver Bell liabilities. The outcome of that evaluation process was a decision, reached within a few months of the transaction's December 1978 closing, that Minerals and Union should dispose of Silver Bell's properties in the Ophir area. They carried out that decision over the following months. (Facts ¶¶ 34 and subparts 34a-34c; ¶ 35.) This decision and the implementing action was entirely consistent with Minerals' and Union's original purpose for the 1978 Transaction. They were interested in Silver Bell's Sweetwater interest, not these other properties.

It is important to distinguish here between direct liability and successor liability. The Minerals' documents acknowledge that, if and when Minerals acquired Silver Bell properties, it might take on certain direct liabilities as owner of there assets. As owner, it would be responsible for conditions on its property after the date of acquisition. That would be direct liability. But the documents say nothing to suggest that Minerals intended to assume pre-

existing Silver Bell liabilities for Silver Bell actions during Silver Bell's ownership of those assets. That would be successor liability. Simply stated, the documents recognize that Minerals, as owner, might have liability for its period of ownership of Silver Bell's Ophir properties. This ownership period turned out to be less than two years. But the documents give no credence to PacifiCorp's theory – that Union and Minerals demonstrated an intent to assume 38 years of pre-existing Silver Bell liabilities. These internal documents do not and could not modify the clear terms of the 1978 Agreement negating any such liability assumption.

E. Conclusion: No Assumption Of Liability.

PacifiCorp asserts that Union and Minerals assumed Silver Bell liabilities for remediation of PacifiCorp's tailings pond. The 1978 Agreement is crystal clear that Union and Minerals did not make any general assumption of liabilities. The only liabilities assumed were (1) Sweetwater Project liabilities, which are not applicable here; (2) a note to Mancos Corporation, also not relevant here; and (3) obligations in connection with assets arising subsequent to closing. This latter category does not include the Silver Bell tailings pond liability that is asserted in this action. In the face of the express contract language of non-assumption, as a matter of fact and law there can be no implied assumption of liability here.

III. DE FACTO

III. UNION'S ACQUISITION OF SILVER BELL ASSETS WAS NOT A DE FACTO MERGER. EXCEPTION 2 TO THE NO SUCCESSOR LIABILITY RULE DOES NOT APPLY.

This section of the memorandum will address PacifiCorp's claim that the second exception to the general rule of no successor liability applies here because the 1978 asset acquisition transaction amounted to a de facto merger of Silver Bell into Union or Minerals. This transaction was not a de facto merger. The elements were not met on the facts here.

A. The Elements of a De Facto Merger Are Not Present.

The elements of the de facto merger exception are straightforward. To establish this exception to the no successor liability rule, PacifiCorp would have to prove:

1. A continuity of the enterprise of the seller (Silver Bell) into the buyer (Union or Minerals) in terms of management, personnel, physical location, assets and operations;
2. A continuity of shareholder control from the selling corporation (Silver Bell) to the purchasing corporations (Union and Minerals);
3. The seller (Silver Bell) ceased operations, liquidated and dissolved as soon as legally and practicably possible; and
4. The purchasing corporations (Union and Minerals) assumed the obligations of the seller (Silver Bell) necessary for uninterrupted continuation of Silver Bell business operations.

E.g., Louisiana Pacific Corp. v. Asarco Inc., 909 F.2d 1260, 1264 (9th Cir. 1990); Philadelphia Elec. Co. v. Hercules, Inc., 762 F.2d 303, 310 (3d Cir. 1985), cert denied, 474 U.S. 980 (1985); Atlas Tool Co. v. Commissioner, 614 F.2d 860, 870 (3d Cir. 1980).

1. There Was No Continuity of Management, Personnel, Physical Location, Assets And Operations In New Owner.

Before courts will find a de facto merger, they scrutinize the seller and buyer carefully, looking to see if all the constituent components of the seller – management, employees, location, assets and operations – continue as a going concern under the buyer. The courts evaluate the transaction to see whether, in all essential aspects, the same business continues with only a pro forma, non-substantive change. That did not happen in this case.

a. Management & Personnel. The starting point of a de facto merger analysis focuses on the critical element of whether the seller's management and personnel continued into the buyer. Some examples will illustrate that what the courts require for this element of a de facto merger is not present in the 1978 Transaction.

In HRW Systems Inc. v. Washington Gas Light Company, 823 F. Supp. 318, 334-335 (D. Md. 1993), the court evaluated the continuity of management by looking at directors and officers. It found a "large degree" of continuity of directors, and a "complete continuity of officers." The court then looked at personnel and found that substantially all the employees of the seller became employees of the buyer. Based on these facts, the court found the first element of de factor merger was met.

Similarly, in New York v. N. Storonske Cooperage Co., 174 B.R. 366, 382-383 (N.D. N.Y. 1994), the court found the required continuity, but again, under facts very different from those existing here. The seller was controlled by one man, i.e., the sole shareholder was president, director, and ran the business. He formed the buyer corporation, but made his wife the sole shareholder, director, and president of that entity, while he served as

adviser. When marital difficulties developed, the husband took back the stock and made himself the president and director of the buyer. Thus, management continued from seller to buyer. The seller's employees also continued as employees of buyer, and the companies had the same bookkeeper, accountant, and attorney. On these facts, the court held that this first element of the de facto merger exception was met.

The undisputed facts before this Court conclusively show that this first element of a de facto merger is not met in this case. No director of Silver Bell became a director, officer or employee of Union or Minerals after the 1978 transaction. (Facts ¶ 27.) No officer of Silver Bell became a director, officer or employee of Union or Minerals. (Facts ¶ 28.) These facts alone preclude a finding of de facto merger. "Central to a de facto merger . . . is a finding that shareholders, officers and directors continued into the buying corporation." John S. Boyd Co. v. Boston Gas Co., 992 F.2d 401, 408-09 (1st Cir. 1993); Dayton v. Peck Stow & Wilcox Co., 739 F.2d 690, 693 (1st Cir. 1984) (transaction cannot be de facto merger because continuity of management lacking). One low level Silver Bell employee was employed indirectly after the transaction. Mr. Les Smith was made caretaker of facilities in the Ophir area, but was employed only through a temporary agency. (Facts ¶ 29.) Union's and Minerals' employment of one low-level employee of Silver Bell clearly does not constitute the continuity of personnel the courts require.

b. Physical Location. Union and Minerals did not keep the same physical location for Silver Bell's business after the transaction. Silver Bell had its corporate offices at 158 Fillmore Street, Denver, Colorado. (Facts ¶ 36.) Union and Minerals made no use of those offices. To the contrary, after the transaction, Silver Bell, the seller, continued to

operate in those offices for about a year – as long as it continued to exist. Mr. Sanders, the president and chief executive of Silver Bell, continued to occupy the company offices. (Facts ¶¶ 36-40.) In addition to continuing Silver Bell, Mr. Sanders ran two other companies, at least one from the 158 Fillmore Street location. (Facts ¶¶ 39-41.) He formed a new company, Outwest Resources, and continued another company, Santier Corp. Mr. Sanders used these companies to acquire and hold mining properties – the same business he had been conducting with Silver Bell. (Facts ¶¶ 29-41.) The facts on this component of the analysis are precisely contrary to what the courts require; the selling entity continued at the old location, entirely separate from and unrelated to the buyer.

c. Assets and Operations. Because this was an asset acquisition, Minerals obviously acquired substantially all of Silver Bell's assets. But Minerals did not continue the enterprise and business operations of Silver Bell. What the courts look for under this factor is whether the seller's operations – plants, products, customers, trade name – continued essentially unchanged. E.g., Philadelphia Elec. Co., 762 F.2d at 311 (buyer acquired seller's corporate name, continued to operate seller's plants, produced the same products, represented to seller's customers that seller was part of buyer's operation); In Re Acushnet River and New Bedford Harbor Proceedings, 712 F. Supp. 1010, 1015-16 (D. Mass. 1989) (buyer continued to manufacture seller's product lines at seller's site, under seller's name; buyer used same physical facilities; buyer used the same banking facilities and insurance companies); Storonske, 174 B.R. at 383 (new company occupied the old company's physical location for at least some time, had the identical customer base, and in all respects, took over and carried on the same business as the old company, using the same manager and personnel); HRW Systems, 823 F.Supp. at 334-35

(seller's ongoing business had moved to buyer). Overall, what the courts look at for this element is whether, to the outside world (customers, public, the industry), it appears that the seller's business and its business continues unchanged. (Id.)

No such situation existed here. Silver Bell's principal asset was ownership of a 35% non-operating interest in the Sweetwater uranium project. (Facts ¶¶ 19, 30.) As non-operator, Silver Bell had a distinct role in that project. (Facts ¶¶ 30a through 30e.) Minerals would report its progress and make recommendations on the course of development. (Id.) These were presented in written reports and technical committee meetings attended by representatives of both companies. (Id.) Silver Bell had the right and obligation to market its interest in production separately from Minerals. After the 1978 Transaction, Silver Bell's role and function disappeared. (Facts ¶ 31.) There was no longer a minority interest in the venture. Minerals no longer had to report and consult with a non-operating partner. Minerals – the buyer – continued the role it had been performing, namely planning and developing the project. But there was no need for a Technical Committee that included Silver Bell representatives to review and approve plans for exploration and development. (Facts ¶ 31.) There was no need for separate accounting for the separate interests. There was no need for marketing production separately. A de facto merger requires that Silver Bell's operation – that of non-operating member of the venture – continue. It did not.

As to Silver Bell's other properties, and particularly the ones in the area at issue in this case, there was again a fundamental change. Silver Bell had accumulated and was holding for potential development a large number of mining claims in the area of Ophir, Colorado. Minerals took a different approach. Immediately after the 1978 Agreement was

signed, and before it even became effective in December 1978, Minerals commenced an evaluation of the Silver Bell properties to determine whether to hold them or drop them. (Facts ¶¶ 32-33.) By February, 1979, two months after the 1978 Transaction closed, staff recommended dropping the Silver Bell interests in the Ophir area. (Facts ¶ 34, 34a.) Less than a year after the acquisition, Minerals had terminated an agreement that controlled a substantial portion of the Silver Bell properties and surrendered all those interests. (Facts ¶ 34b.) Within 14 months of the effective date of the transaction, Minerals was offering for sale to the industry all the remaining Silver Bell properties in the area. (Facts ¶ 34c.) Less than two years after the effective date of the transaction, all the properties acquired from Silver Bell in the Ophir area were sold. (Facts ¶¶ 34c, 35.) Plainly, Minerals did not continue the Silver Bell business.

2. There Was No Continuity of Shareholder Control.

Under the 1978 Agreement, Minerals paid for the assets it acquired with Union stock. Presumably, most Silver Bell shareholders exchanged their stock for Union stock. But collectively, the Silver Bell shareholders received less than 1% of Union's stock. (Facts ¶ 49.) This minimal shareholder interest does not fulfill the substance of this element of a de facto merger.

Although some courts have said that this element is established if stock is exchanged for assets, e.g., Dayton, 739 F.2d at 693, many of the courts that have analyzed this element of the de facto merger exception have required more than simply that shareholders of the seller became shareholder of the buyer. These courts have held that the shareholder continuity factor requires a *continuity of control* from buyer to seller. These courts have required that the assets as acquired and operated by the buyer remain under essentially the same control after the

transaction as before. See, e.g., Atlas Tool Co., 614 F.2d at 870 ("in de facto [merger] situations, the factors considered have included: (1) continuation of the same shareholder control particularly in the instance of a sole shareholder . . ."); Louisiana Pacific Corp., 909 F.2d at 1264-65 (court reviewed fact that, while no shares passed in transaction, some shareholders of seller held stock in buyer after transaction, but noted that no selling shareholder had more than 2-1/2 percent of buyer company stock); HRW Systems, 823 F. Supp. at 335 (selling entity "took pains" to eliminate minority stockholders prior to transaction so that at time of transaction same stockholders controlled both entities, and that control continued after transaction); Adams v. General Dynamics Corp., 405 F. Supp. 1020, 1022 (N.D. Cal. 1975) (there was no de facto merger because, in part, less than 2 percent of the buyer's outstanding stock was exchanged); East Prairie R-2 School District v. U.S. Gypsum Co., 813 F.Supp. 1396, 1400-1401 (E.D. Missouri 1993) (no de facto merger because, in part, only 2.27 percent of the seller's common stock was exchanged).

Under the circumstances here, while shareholders of Silver Bell became shareholders of Union, collectively, they held less than 1% of Union stock. Thus, there was no continuing shareholder control of the sold assets. There was no common control of Silver Bell and Union-Minerals before the 1978 Transaction. Silver Bell shareholders, who had the power to direct management of the company assets prior to the transaction, totally lost that power after the transaction. The assets went to a totally different entity, one in which Silver Bell shareholders had a de minimis interest. Under the cited cases, this would not satisfy this element of the de facto merger exception.

3. Silver Bell Did Not Dissolve and Liquidate as Soon as Legally and Practically Possible.

Silver Bell did dissolve and liquidate, but not as soon as legally and practically possible. To the contrary, Silver Bell continued its business for almost a year, until November 1979. (Facts ¶ 38.) During that time it continued to lease office space. (*Id.*) It had officers and directors. Certainly it was planning, as a part of the transaction, that it ultimately would dissolve and liquidate. But, that did not happen for some time. For almost a year after this transaction, Silver Bell continued as a viable entity. Throughout that time, it had millions of dollars in assets (Union stock) available to pay its liabilities. (Facts ¶¶ 51-52.)

4. Minerals Did Not Assume Silver Bell Obligations Necessary For An Uninterrupted Continuation Of Business.

Under this element of the de facto merger exception, the courts have looked to see whether, consistent with basic concept of "continuing the operational enterprise," the buyer took on the regular, day-to-day liabilities that would be associated with keeping the business functioning, unchanged, after the transaction. Thus, courts have looked to see whether the seller assumed such liabilities as purchase orders, liens, licenses, taxes, loan commitments, warranty and product return claims, sales, employee expenses, employee benefits, union agreements, and executive compensation agreements. *E.g., New York v. Panex Indus. Inc.*, 1996 U.S. Dist. LEXIS 9418 at *31 (W.D.N.Y.)(Attachment A)⁶; *see also HRW*, 823 F.Supp. at 335 (buyer took on all "liabilities and obligations" as well as carrying out all the contracts in every respect to

⁶ Unpublished and hard to find legal authorities are referenced as Attachments A through O and will be provided to the Court in a separate binder labeled "Unpublished and Hard To Find Legal Authorities."

fulfill its duties and obligations); Acushnet, 712 F.Supp. at 1016 (buyer assumed the balance sheet liabilities and agreed to perform all its written contracts).

Minerals did not assume these types of Silver Bell liabilities. It assumed the liability for the carried interest, i.e. moneys it had advanced for development of the Wyoming property. It assumed a single note payable. It agreed to assume certain contingent obligations that might arise after closing. Silver Bell retained all other pre-closing and post-closing liabilities. (Facts ¶¶ 51-52.) Indeed, the provisions of § 2.02 of the 1978 Agreement preclude a finding that this element of the de facto merger exception is present. Section 2.02 provides that Silver Bell's pre-closing liabilities were retained by Silver Bell. Under this provision, office lease, tax obligations, employee compensation, executive compensation, benefits, and all the other standard liabilities of an ongoing business continued as Silver Bell obligations. (Facts ¶ 25a, 51.) They were not assumed by Minerals.

5. Summary of De Facto Merger Factors.

Fundamentally, what courts have required before finding a de facto merger is that the seller's business, as an active, distinct, functioning operation, continued in all respects after the transaction so that, from the perspective of the industry and the public, there was no substantial change in the business being conducted. Thus, in In re Achushnet River, 712 F. Supp. at 1015-16, the court expressed this concept as follows:

Since the closing, Aerovox [buyer] has continued to manufacture Belleville's [seller] product lines of electrical capacitors and related products at the plant site, and the products continue to be sold under the "Aerovox" name. The president, the vice president, and the treasurer of Belleville all assumed those same positions at Aerovox. These three Belleville officers also became Aerovox directors. The middle management of Belleville became, in most respects, the middle

management of Aerovox. The employees of the two corporations were essentially the same. The same physical facilities were utilized. Aerovox also used the same banking facilities and the same insurance company as had Belleville. For all the world could tell from outward appearance, Aerovox Industries had simply shortened its name.

The Third Circuit expressed the very same idea in Philadelphia Electric Co., 762

F.2d at 311. The court found:

PICCO was to use its best efforts to keep its business organization intact, to keep available to Hercules [buyer] the service of its present employees and to maintain its relationship with its customers and suppliers for Hercules' benefit: PICCO's management and personnel became a part of Hercules; PICCO was required, to the extent permitted by law, to transfer to Hercules the right to use its corporate name; . . . following closing, Hercules continued to operate the PICCO plants, produce the same PICCO products and represented to PICCO's customers that PICCO resins had become part of Hercules' Organics Department.

These cases establish the same overall test for a de facto merger. The courts look to see whether an ongoing business, with all its components – directors, officers, managers, employees, operations, customers, products, production facilities, product name, and routine debts and obligations associated with those functions – is transferred to the buyer and continues unchanged to all outward appearances. The facts before this Court simply do meet that test. Silver Bell assets passed to Minerals. But no ongoing business passed to Minerals or Union. No directors, officers, managers, physical location, operations, customers, products, or facilities continued functioning as Silver Bell after the 1978 transaction. No member of the public or the industry would think that Silver Bell was still in business with perhaps a change in name. The elements of the de factor merger exception simply have not been met. No court has sustained a finding of de facto merger in circumstances like these.

B. The Union-Silver Bell Transaction was Structured as a Tax-free Acquisition of Assets Under Section 368(a)(1)(C) of the Internal Revenue Code. This Structure Does Not Make the Transaction a De Facto Merger.

Minerals' 1978 acquisition of Silver Bell's assets was structured as a tax-free acquisition under Section 368(a)(1)(C) of the Internal Revenue Code, 26 U.S.C. § 368(a)(1)(C) (the "Code"). (Facts ¶ 42.) Under this section, a company (Silver Bell) can sell substantially all its assets, be paid primarily with stock of the acquiring company (Minerals) or its parent (Union), and not incur tax liabilities for itself or its shareholders from the sale. Such acquisitions are routinely used in the business world for this tax advantage. PacifiCorp now argues that such a transaction, by its very nature, is a de facto merger that passes the seller's liabilities to the purchaser. PacifiCorp's argument is wrong as a matter of law.

1. Background: Silver Bell Wanted A Tax-Free Transaction.

The undisputed facts here establish that in 1978 Union and Minerals wanted to acquire Silver Bell's 35% carried interest in the Sweetwater Project. Several sound business reasons factored into that intent. (Facts ¶¶ 43-48.) At the same time, Silver Bell was looking to sell its interest, and had offered it around the uranium and utilities industries. (Facts ¶ 43-48.) But Silver Bell was rightly concerned with the tax aspects of any sale of its assets. The Wyoming project was valued in excess of \$20 million. (Facts ¶¶ 19, 50.) If Silver Bell simply sold its interest in that project, it would incur two levels of tax. First, at the corporate level, Silver Bell would incur income tax on the difference between the money it received and its basis in the project. In 1978, the maximum corporate income tax rate was 22%. After the sale and payment of the corporate tax, the only way Silver Bell could have distributed the after tax sales

proceeds to its shareholders was as dividends. The shareholders would have incurred ordinary income tax on those dividend distributions.

Under the tax laws, Silver Bell had two basic choices to structure an asset acquisition transaction that would be tax-free to Silver Bell and its shareholders. First, it could arrange a merger of Silver Bell into Union under Section 368(a)(1)(A) of the Code. This would serve Silver Bell's interest, as it would avoid tax to Silver Bell and its shareholders. On the other hand, it would not serve Minerals' (or any other buyer's) interest, as it would pass all Silver Bell's liabilities, known or unknown, fixed or contingent, to Minerals. The alternative was to sell substantially all Silver Bell's assets to Minerals or Union under Section 368(a)(1)(C) in return for Union stock. If the parties met the technical requirements of the Code, as a matter of tax law, the asset sale would be tax-free to Silver Bell, and, as a matter of corporate law, it would not pass Silver Bell's liabilities to Union or Minerals. While all these factors are not laid out in this detail, the discussion of the transaction in the parties' pre-contract documents and in the SEC Form S-14 Registration Statement confirm the considerations in issue. (Facts ¶ 42.)

2. Section 368(c)(1)(C) Does Not Change The General Rule Of Corporate Law That There Is No Successor Liability In An Asset Acquisition

PacifiCorp's present argument is that, because the Internal Revenue Code gives an asset acquisition that meets the technical requirements of § 368(a)(1)(C) the same tax-free treatment as the Code gives a merger transaction under § 368(a)(1)(A), the asset acquisition is a merger for general corporate law purposes. There is simply no support for this assertion as a matter of corporate or tax law. The Internal Revenue Code does not purport to define whether

and when liabilities pass in a corporate transaction. The Code leaves that to corporate law. What the Code does is to set technical requirements for a transaction which, if met, entitle the parties to the transaction to a certain tax treatment.

The basic principle that the selling company's liabilities are not automatically assumed in a transaction qualifying under Section 368(a)(1)(C) of the Code is well recognized in tax law. See generally BORIS I. BITTKER AND JAMES S. EUSTICE, *FEDERAL INCOME TAXATION OF CORPORATIONS AND SHAREHOLDERS*, Section 12.24(1) at 12-76 to 12-77 (7th Ed. 2000) (when "the acquirer does not want to automatically inherit all of the target's liabilities, the [§ 368(a)(1)(C) transaction] is ready for service")(Attachment B); see also, 771 2nd TAX MANAGEMENT PORTFOLIO, § C.1.b. at p. A-25 (2000) (Unlike a merger, a transaction under Section 368(a)(1)(C) "offers Acquiror the ability to pick and choose the Target liabilities to be assumed."); Robert W. McGee, *Planning a tax-free corporation reorganization: Selecting the one best suited to a client's needs*, 6 TAX'N FOR LAWYERS 1, July-August 1977, at p.37 (In § 368(a)(1)(C) transaction, "[t]he acquiring corporation can choose which liabilities of the Target it will assume, thereby eliminating responsibility for contingent or unknown liabilities."). (These authorities are attached as Attachments B through D.) In short, a transaction under Section 368(a)(1)(C) is nothing more than a straightforward sale of assets which, by virtue of meeting certain technical tax code requirements, qualifies for tax-free treatment. But as with any other asset sale, the liabilities of the seller are not acquired by the purchaser unless (1) the purchase agreement specifically provides otherwise, or (2) the other circumstances of the transaction meet one of the four standard exceptions to the general rule that no liabilities pass in an asset acquisition.

The Internal Revenue Code does not purport to determine whether or not liabilities pass in a certain transaction. But analysis of the various requirements in the Code and tax regulations for a Section 368(a)(1)(C) transaction shows clearly that the drafters of the Code contemplated that all a seller's liabilities would not be assumed by the purchaser in such a transaction. For example, the Code specifies that the consideration used for purchasing assets under Section 368(a)(1)(C) must consist "solely" of "voting stock" in the purchasing corporation. However, Section 368(a)(2)(B) of the Code relaxes this "solely for voting stock" rule to some extent by providing that up to 20% of the consideration paid can consist of non-stock property like cash or "liabilit[ies] assumed by the acquiring corporation." Obviously, this relaxation of the "solely for voting stock" rule would be unworkable if contingent liabilities, unknown to the parties at the time of the acquisition, were automatically transferred to the purchasing corporation in such a transaction. To avoid failing this 20% rule (and converting the transaction to a fully taxable one), tax lawyers recommend that the purchaser in a Section 368(a)(1)(C) transaction specify those liabilities that will be assumed. See, e.g. 771 2D TAX MANAGEMENT PORTFOLIO § C.1.c. at p. A-27 (The acquiror in a [Section 368(a)(1)(C) transaction] "should carefully specify in the reorganization agreement the particular Target liabilities which are being assumed") (Attachment C). If contingent and unknown liabilities, like the CERCLA liability at issue here, were automatically assumed by the purchasing corporation in a transaction under Section 368(a)(1)(C), such careful tax planning would be meaningless. If those unknown liabilities were substantial, the transaction would not qualify for tax-free treatment.

Another major requirement for a § 368(a)(1)(C) transaction is that "substantially all" of the assets of the seller be purchased in the transaction. This also confirms that contingent

liabilities are not automatically assumed by the purchaser in such a transaction. In determining whether "substantially all" of the assets have been acquired in those instances where the purchaser and seller agree that some assets are specifically not being acquired, the I.R.S. and the courts look to the purpose for which such assets were retained by the seller. Specifically, if assets of the seller are retained solely to pay the liabilities of the selling company that are not assumed in the transaction, the I.R.S. will generally find that the "substantially all" test has been met. See generally, Rev. Rul. 57-518, 1957-2 C.B. 253 (Attachment E); Smith v. Commissioner, 34 B.T.A. 702 (1936)(Attachment F). Obviously, if all seller liabilities were automatically transferred to the purchasing corporation in a § 368(a)(1)(C) transaction, such a "retained liability" analysis would not make sense.

Defendants expect that PacifiCorp will argue that another requirement for a § 368(a)(1)(C) transaction (as well as for other types of tax-free reorganizations), the so-called "continuity of business enterprise" requirement, means the same as the "continuity" components of the de facto merger exception. This is not correct as a matter of tax law.

There is a requirement under § 368(a)(1)(C) that will deny tax-free treatment to those transactions where the purchaser acquires the seller's assets with a view towards immediately disposing of those assets. This is commonly referred to as the continuity of business enterprise requirement. Despite its name, however, the rule does not require that the elements of the selling corporation and its business (officers, directors, management, personnel control, location and business operations) actually be continued by the purchaser as is necessary for a de facto merger. To the contrary, in 1978 when Minerals and Union purchased Silver Bell's assets, this requirement simply meant that the purchaser needed to conduct some type of business

after the acquisition, a requirement that Minerals and Union obviously met. See Becher v. Commissioner, 22 T.C. 932, 954 (Tax Ct. 1954), aff'd 221 F.2d 252 (2d Cir. 1955)(Attachment G); Bentsen v. Phinney, 199 F. Supp 363 (S.D. Tex. 1961); Rev. Rul. 63-29, 1963-1 C.B. 77(Attachment H). Although this test was made more restrictive by regulation several years after the 1978 Transaction, even today the doctrine merely requires either that the buyer use a significant portion of the assets of the seller in the conduct the buyer's business or that the buyer continue the seller's business. See Treas. Reg. § 1.368-1(d)(1)(Attachment I). Thus, even under this new, restrictive version of the Code's continuity of enterprise requirement, Minerals' acquisition of Silver Bell's assets would have qualified under § 368(a)(1)(C) without constituting a de facto merger, because it used Silver Bell's assets (35% of the Sweetwater Project) in Minerals' business. This use by Minerals of Silver Bell's interest in the uranium project without any Silver Bell management, employees, location, facilities and operations meets the tax law requirements without constituting a de facto merger. The de facto merger exception requires that the seller's business, with all its constituents, be continued. The current tax law, even in the new stricter form not in effect in 1978, does not require that the seller's business continues.⁷

Finally, based on pretrial proceedings, it appears that PacifiCorp intends to argue that Union's acquisition of Silver Bell's "net operating losses" as part of the overall asset purchase somehow means that Minerals or Union Oil acquired Silver Bell's contingent liabilities.

⁷One other current requirement of a transaction under § 368(a)(1)(C) is that the selling corporation must liquidate immediately after its sells its assets and distribute the voting stock it received as consideration in the transaction to its shareholders. I.R.C. § 368(a)(2)(G). This requirement was not in the Code in 1978. It was not added until 1984. Thus it did not apply to the 1978 purchase of Silver Bell's assets and is irrelevant here.

A net operating loss of a corporation, which can be used in the future to reduce the corporation's income tax liabilities, is an asset, not a liability. The Code provides that net operating losses are automatically transferred to an acquiring corporation in a transaction under § 368(a)(1)(C). See I.R.C. § 381(a)(2). In fact, Union has confirmed that Silver Bell did have losses that passed in the transaction, but that Union and affiliates never used these because of other provisions in the Tax Code. (Facts ¶ 42.) But whether used or not, the fact that these assets passed in the transaction does not change the fact that this current transaction did not pass Silver Bell liabilities to Union or Minerals.

Defendants acknowledge that there have been cases in which some courts have considered as a factor in their de facto merger analysis the fact that the underlying transaction was structured as a tax-free transaction under § 368(a)(1)(C) of the Code. E.g., In Re Master Key Antitrust Litigation, 1976 WL 1377, **2-3 (D. Conn. 1976)(Attachment J); In Re Acushnet River, 712 F. Supp. at 1018-19. But those cases have been ones in which the other factors required for a de facto merger have been present as well. Those courts have simply looked at the tax-free structure of the transaction as one additional fact in situations that already were clearly within the elements of the de facto merger. Thus, in the Master Key case, the court considered the tax structure issue only "in addition" to the other factors, after it found that there was continuity of management, personnel, assets, and business operations from seller to buyer; that after the transaction, the buying company manufactured the same products, at the same locations, with the same personnel as the seller; and that other elements of de facto merger also present. Similarly, in the Acushnet decision, as quoted above, the court conducted a detailed analysis of how all the standard elements of the de facto merger exemption were present. Only after that

analysis did it add the consideration that the tax treatment "militates in favor of finding a de facto merger."

On the other hand, in a recent case, Chrysler Corp. v. Ford Motor Co., 972 F. Supp. 1097, 1111 (E.D. Mich. 1997), the court rejected the assertion that the fact that asset acquisition was structured as a tax-free transaction under § 368 of the Code made it a de facto merger. The court found that "this argument carries no weight," in light of the fact that its analysis showed that the four standard requirements for a de facto merger analyzed above were not present under the facts of the case.

PacifiCorp's argument that the tax structure of the transaction makes it a de facto merger fails. Transactions under Code § 368(a)(1)(C) have been used routinely for decades. Tax and corporate authorities agree that such transactions do not transfer a seller's liabilities. Rather, whether there is a de facto merger is decided under the elements discussed above in Sec. III. A of this brief. Those elements are not met in this case.

IV. CONTINUATION

IV. THE ACQUISITION OF SILVER BELL ASSETS WAS NOT A MERE CONTINUATION OF SILVER BELL. EXCEPTION 3 TO THE NO SUCCESSOR LIABILITY RULE DOES NOT APPLY.

The mere continuation exception to the general rule of no successor liability in an asset acquisition is straightforward. "A corporation is not to be considered the continuation of a predecessor unless, after the transfer of assets, only one corporation remains, and there is *an identity of stock, stockholders, and directors between the two corporations.*" United States v. Carolina Transformer Co., 978 F.2d 832, 838 (4th Cir. 1992); *see, e.g., Alcan Aluminum Corp. v. Electronic Metal Prods., Inc.* 837 P.2d 282, 283 (Colo. App. 1992) (mere continuation exception applies where there is "a continuation of directors and management, shareholder interest, and, in some cases, inadequate consideration"); Florum v. Elliott Mfg. Co., 867 F.2d 570, 578 n.3 (10th Cir. 1989) (same – applying Colorado law); United States v. Mexico Feed and Seed Co., 980 F.2d 478, 487 (8th Cir. 1992) (must have "identity of officers, directors and stock" between selling and purchasing entities); Dayton v. Peck, Stow and Wilcox Co., 739 F.2d 690, 693 (1st Cir. 1984) (key element of mere continuation is "common identity" of officers, directors and shareholders). This Court has echoed this rule, applying Colorado law holding that the mere continuation exception is ordinarily limited to "situations where the selling and buying corporations are essentially the same entity (i.e., common directors, shareholders, etc.) operating under different names." Scott v. Sopris Imports, 962 F. Supp. 1356, 1358 (D. Colo. 1997) (citing Kloberanz v. Joy Mfg. Co., 288 F. Supp. 817, 821 (D. Colo. 1968) (decisive factor in finding against mere continuation was that "no common identity of stock, directors, officers, or stockholders . . .").

It is undisputed in this case that there was no identity of officers, directors, or shareholders between Silver Bell as seller of assets and Minerals and Union as purchasers. The parties' stipulations establish conclusively that *no officer and no director of Silver Bell became an officer, director or employee of Union Oil Co. or Minerals Exploration Co. after this transaction.* (Facts ¶¶ 27-28.) As a result of the 1978 Transaction, there was not even a single officer or director in common between Union and Minerals on the one hand and Silver Bell on the other. The courts require "*identity* of officers and directors." "Identity" would require that all officers and directors be the same.

It is equally undisputed that there was no "identity of shareholders between Silver Bell and the Union/Minerals Companies." Silver Bell shareholders did acquire Union shares, but their 418,095 shares constituted fewer than 1 percent of the total shares of Union. (Facts ¶ 49.) This would not be the "identity of stock" that the cases require for the mere continuation exception.

PacifiCorp's claim that the third exception to the general rule of no successor liability applies here must fail. There was zero continuity of officers, zero continuity of directors, zero continuity of management, and nothing remotely close to "common identity" of shareholders. The factual elements of this exception simply are not present.

V. FRAUD

V. THE 1978 AGREEMENT WAS NOT FRAUDULENTLY ENTERED INTO TO AVOID LIABILITY FOR THE TAILINGS POND. EXCEPTION 4 TO THE NO SUCCESSOR LIABILITY RULE DOES NOT APPLY.

The fourth exception to the no successor liability rule is that an asset purchaser may be held to have acquired liabilities if the parties entered the transaction with fraudulent intent, and the buyer paid inadequate consideration so that a previously solvent seller is left with no assets. There is no evidence that the 1978 Transaction was fraudulent.

The most detailed recent explanation of the fraud exception in a CERCLA case is in Atchison, Topeka & Santa Fe Ry. Co. v. Brown & Bryant, Inc., 159 F.3d 358 (9th Cir. 1998). In that case, a purchaser bought the equipment assets of a chemical business (but not contaminated properties) four years after the seller and other PRPs were ordered to complete cleanup activities on land the seller owned and on adjacent property it leased from other PRPs. Under the purchase agreement, the parties specified the buyer was not a purchaser of the business, nor was it a de jure or de facto successor. The seller indemnified the buyer from environmental liability. Post-purchase, the buyer hired most of the old employees, including all of certain advisers who were critical to the business. Buyer took the seller's phone numbers after the purchase, and newspaper articles described the two companies as "joining." (Id.) The seller could not pay for cleanup, and EPA ordered the PRPs to undertake response activities. The PRP group brought an action for contribution from the buyer under the "fraudulently-entered transaction" exception. 159 F.3d at 360-361. The Ninth Circuit granted summary judgment on the fraud claim. 159 F.3d at 365. It held there was no fraud, despite finding that the buyer knew of the seller's environmental problems and bought only "clean" assets. The Court noted that the record did not show any intent on the part of the purchaser or the seller to structure the sale "solely to circumvent

CERCLA liability." (Id.) The buyer paid the appraised value for the assets, and the plaintiffs did not present evidence that the amount paid was too low. (Id.)

Apparently, no court has found successor liability in a CERCA case based on the fraud exception. Atchison, 159 F.2d at 365. Based on the discussion in cases that have evaluated this exception, however, it appears that there are at least two elements that must be present before a court will find that an asset sale is fraudulent so that liabilities pass to the asset buyer: (1) inadequate consideration so the seller is left "denuded" of assets to satisfy its liabilities; (2) a fraudulent motive, that the parties structured the transaction to avoid the known liabilities in issue. Atchison, *supra*; Knapp v. North Am. Rockwell Corp., 506 F.2d 361, 366 (3d Cir. 1974), *cert. denied*, 421 U.S. 965 (1975) (adequacy of consideration is relevant to the fraud inquiry because it will determine whether the sale served as "a mechanism to 'denude' the seller of assets, and thus the ability to satisfy the claims of its creditors."); Mexico Feed & Seed Co., 980 F.2d at 489-90 (fraud exception would apply where a purchasing corporation bought only "clean" assets and left the "dirty" assets behind, with insufficient resources to cover any liability).

Neither element is present in this case. Minerals paid \$23.5 million, which equaled or exceeded market value for the assets purchased. Neither party can be shown to have had any type of fraudulent motivation.

A. Union And Minerals Paid Fair Market Value For Silver Bell's Assets.

The record before this court shows clearly and unequivocally that Minerals paid at least fair market value for the assets of Silver Bell, and maybe more. Minerals paid Silver Bell 418,095 shares of Union common stock as consideration for the purchased assets. As of the date of the parties' agreement, May 15, 1978, the value of those shares was approximately \$21

million. As of the date of the closing of the transaction in December 1978, the value of that stock had increased to approximately \$23,497,000. (Facts ¶¶ 18, 49.)

The facts show that Silver Bell had negotiated with a number of companies other than Union and Minerals during the mid-1970s looking to sell its interest in the Wyoming uranium project or all its assets. (Facts ¶¶ 47-48.) The record of those negotiations confirms that the price paid for Silver Bell assets was consistent with the valuations placed on Silver Bell by those other entities. (Facts ¶ 50.) One interested party was Pacific Gas and Electric, which was apparently offering \$16-17 million. (Facts ¶¶ 48, 50.) Minerals, as would be expected, prepared its own appraisals of Silver Bell and its assets in 1976-78. (Facts ¶ 50.) Those appraisals concluded that Silver Bell's primary asset was its 35% interest in the Sweetwater Project. (Facts ¶¶ 19-20, 50.) Minerals, as the operating member of that venture, was in a good position to appraise that asset. Minerals reviewed information as to Silver Bell's other assets. It concluded that those had minimal value, but did factor them into the appraisal. Those internal appraisals placed the value of Silver Bell assets in the range of \$18-20 million. (Id.)

Union, Minerals and Silver Bell negotiated the sale of assets as an arms-length transaction. Silver Bell was a publicly traded company. (Facts ¶ 22.) Shareholder approval was required. Shareholders were entitled to full information on the transaction. (Id.) A proxy statement was prepared and filed. (Id.) The preliminary prospectus stated that the Union stock offer was "the best offer received by Silver Bell in the more than two years of negotiations with many companies." (Facts ¶ 49.) This transaction also required registration of the Union shares with the SEC. (Facts ¶ 22.) This required filing a formal SEC Form S-14 Registration Statement with a complete description of the parties, the transaction, copies of contract documents, and all

relevant information. (Id.) Certified financial statements were included. (Id.) The 1978 transaction was conducted openly, publicly, and subject to the federal securities laws. (Id.) There is no basis on this record to say that the \$23.5 million of stock paid to Silver Bell was inadequate in any respect. (Id.)

The SEC Form S-14 Registration Statement also confirms that Silver Bell was not left "denuded" of its assets and wholly unable to pay its liabilities. Minerals paid Silver Bell \$23.5 million in Union stock. The terms of the Registration Statement show that that stock, together with Silver Bell's cash and other retained assets, was to be used to pay Silver Bell liabilities. (Facts ¶¶ 51-52.) The Registration Statement expressly estimated that approximately 4,000 shares of stock – worth approximately \$200,000 – would have to be sold to pay for existing obligations and expenses associated with the transaction and ongoing business. (Facts ¶ 51.) The Registration Statement expressly stated that if those estimates proved low, more stock would have to be sold. (Id.) This was consistent with the Colorado Corporation Code in effect at the time Silver Bell dissolved. The law expressly required that a dissolving corporation provide for the payment of all its obligations before it distributed corporate assets to its shareholders. 1973 C.R.S. § § 7-8-105(2) and 107(c)(Attachment K); Ficor Inc. v. McHugh, 639 P.2d 385, 392 (Colo. 1982) (corporation code required "that shareholders not receive corporate assets on dissolution unless and until creditors have been paid . . . ").

Even after dissolution, there were assets available to pay Silver Bell creditors. In November 1979, more than \$1 million dollars from the sale of unclaimed shares was turned over to the Colorado Treasurer's office to be held for future claimants. (Facts ¶ 52.) The corporation code also provided that, notwithstanding dissolution, remedies would be available against the

corporation, its directors, officers or shareholders for any liability incurred prior to such dissolution for a period of two years after the date of dissolution. 1973 C.R.S. § 7-8-122(1)(Attachment K). In this case, PacifiCorp could have brought an action against Silver Bell, its directors, officers or shareholders at least until November 1981 to recover on any claim arising out of or relating to the tailings pond. 1973 C.R.S. § 7-5-114(3) (directors liable for liquidation distributions where liability is not satisfied)(Attachment L); Ficor, 512 P.2d at 392-95 (creditors may bring action against directors under that statute). The directors of Silver Bell held approximately 8.2% of the shares of the company, which would have had a value of almost \$2 million as of the date of closing. (Facts ¶ 52.) The largest single shareholder (Consolidated Oil and Gas) held 11.2% of the stock, which would have had a value in excess of \$2.5 million. (Facts ¶ 52.)

These facts establish that Silver Bell was not left denuded of assets. PacifiCorp and its predecessors had more than adequate time to assert their claim. They sat on their rights. If, as PacifiCorp claims now, Silver Bell had breached its obligation to stabilize the tailings pond in 1975, that liability existed in 1978. It is notable that Minerals' staff estimated the potential cost associated with stabilizing the tailings pond in 1978 at \$125,000. (Facts ¶ 60.) Had PacifiCorp come forward with its claim at that time, Silver Bell had \$23.5 million to satisfy that \$125,000 obligation.

PacifiCorp has the burden to prove that Union did not pay fair market value for the assets it acquired from Silver Bell. PacifiCorp has yet to provide in discovery a shred of evidence on that issue. No such evidence exists. The fraud exception cannot apply.

B. Silver Bell And Union Did Not Structure This Transaction With The Intent To Avoid Environmental Liabilities.

Another element PacifiCorp must prove on its fraudulent transaction claim is that Silver Bell and Minerals/Union had a fraudulent intent, that at least a principal motivation for the transaction, and perhaps the sole motivation, was to circumvent known CERCLA or other environmental statutes. Atchison, 159 F.3d at 365. PacifiCorp can prove no such motivation here.

As discussed above, the driving force behind the 1978 Agreement for both parties was Silver Bell's desire to sell its 35% interest in the Sweetwater Uranium Project. (Facts ¶ 43-48.) That interest had a value in the range of \$18-20 million. (Facts ¶¶ 19, 50.) Silver Bell wanted to sell that; Union wanted to acquire it. Undisputably that was the focus of the parties' discussions leading up to the transaction. This genuine economic purpose for both parties to this transaction precludes any finding of fraud in this transaction.

Indeed, PacifiCorp has no evidence of the parties identifying and avoiding potential environmental liabilities that would be left behind in the transaction. After the contract was signed, Union and Minerals conducted an evaluation of Silver Bell's non-Sweetwater assets to determine their value and identify potential liabilities that might be associated with them. (Facts ¶¶ 31-32.) That included the properties in the Ophir area. Minerals recognized that there were some potential liabilities that it might acquire as owner of some properties. But no properties were dropped from the transaction between contract and closing to avoid such liabilities. This was not a case of leaving "dirty assets" behind. Mexico Feed and Seed Co., 980 F.2d at 489-90.

This lack of fraudulent intent is confirmed by the openness of the transaction discussed above. Under Securities and Exchange Commission rules, Union had to file a Form S-14 registration statement. (Facts ¶ 22.) Silver Bell had to prepare a proxy statement for its shareholders who had to approve the transaction. (Id.) The S-14 Registration Statement included a highly detailed description of the transaction, the parties' businesses, and all the circumstances. (Id.) Everything about this transaction was done openly and above board, as a matter of public record. (Id.) That belies any notion of fraud.

There is nothing in the record that avoiding known environmental liabilities was even considered. Certainly, a motivation for Union to structure the transaction as an asset purchase was to avoid taking on unknown and contingent liabilities. But this motive exists in every asset purchase transaction. That is not fraudulent or improper, but a perfectly proper and routine motive in corporate transactions.

PacifiCorp has a heavy burden here. It must show that \$23.5 million was inadequate consideration for the assets sold by Silver Bell. There is no such evidence. PacifiCorp must also show that Silver Bell, Minerals and Union had a fraudulent intent – to avoid known liabilities by this transaction. Again, there is no such evidence.

VI. PERMIT

VI. NEITHER UNION NOR MINERALS ASSUMED SILVER BELL'S LIABILITY UNDER THE 1976 NPDES PERMIT WHEN MOLYCORP APPLIED FOR TRANSFER OF THAT PERMIT.

Molycorp Inc. is a subsidiary of Union, and a separate corporate entity from either Union or Minerals. (Facts ¶ 4.) PacifiCorp asserts that, through the actions of Molycorp, Union has successor liability to Silver Bell for Silver Bell's obligation under a 1976 NPDES permit to perform certain remedial work at the tailings pond. The basis for this claim is that Silver Bell had been issued an NPDES permit in 1976 with the requirement to perform certain remedial work when Silver Bell terminated its milling operations. (Facts ¶¶ 53-54.) Silver Bell stopped milling in 1975. (Facts ¶ 10.) In late 1977, Silver Bell submitted to the State its plan for the work and committed to finish the work by October 1978. (Facts ¶ 55.) Silver Bell did not perform the work. (Facts ¶ 55.) On March 10, 1980, Molycorp executed an application with the State for transfer of the permit. (Facts ¶ 58.) In that application, Molycorp stated that it accepted the permit terms. PacifiCorp apparently claims that the application for transfer of the permit makes Molycorp (and somehow Molycorp's parent) successors to Silver Bell for Silver Bell's failure to perform the required work. (A more detailed statement of the facts relating to the permit is set out in the Factual Summary, ¶¶ 53-65.)

Defendants strongly object to PacifiCorp's attempt to assert that they or either of them have liability based on the actions of Molycorp Inc., a separate corporate entity. No such claim has been pleaded. No such claim has been asserted through a year of pretrial proceedings, disclosure and discovery. In fact, PacifiCorp's counsel has discussed for months filing an amended complaint, not to assert Molycorp's permit actions as a claim against these Defendants, but to add Molycorp as a defendant and assert against it a claim for successor liability under

Silver Bell's permit. For PacifiCorp at this late date to seek in effect to amend its complaint to assert a new theory of liability against these Defendants would be fundamentally improper and unfair. When Defendants receive PacifiCorp's brief and see how the argument is framed, they will file a separate motion in limine and motion to strike such allegations. But, without waiver of this objection to any such claim, this brief will show that any effort to assert against anyone a claim based on Silver Bell's 1976 NPDES permit must fail as a matter of law, for the following reasons:

1. PacifiCorp's claim is a private action for damages based on a violation of a permit that expired in 1981. Such an action is barred by the Clean Water Act on multiple grounds.

2. As a matter of law, a subsequent permittee does not, by agreeing to a transfer of a permit, assume liability for actions or omissions of a prior permittee.

A. This Claim Asserts A Private Civil Remedy For A Violation Of An NPDES Permit. The Claim Is Barred By The Citizen's Suit Restrictions In The Clean Water Act.

The NPDES permit at issue here was issued pursuant to the Federal Clean Water Act. 33 U.S.C. § 1251, *et seq.* (1986 & Supp. 2000). Section 301(a) of the Act makes it unlawful to discharge any pollutant into navigable waters except as authorized by the Act. 33 U.S.C. § 1311(a). The Act establishes the National Pollutant Discharge Elimination System ("NPDES"). 33 U.S.C. § 1342. Under this section, the administrator of the Environmental Protection Agency may issue permits authorizing discharge of pollutants subject to specified conditions. 33 U.S.C. § 1342(a). The permit program may be delegated to a state if the state establishes and administers a program that conforms to federal rules and is approved by the

administrator. 33 U.S.C. § 1342(b); Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc., 484 U.S. 49, 52-53, 108 S.Ct. 376, 379 (1987). By 1976, Colorado was administering the NPDES permit system within the state.

The holder of a state NPDES permit is subject to enforcement actions by EPA and the state agency that administers its permit program. Under the Clean Water Act, a private citizen may bring an action for a violation of a permit only in very narrow circumstances. Specifically, in the absence of a federal or state enforcement action, a private citizen may commence a civil action against any person "alleged to be in violation of" the conditions of a federal or a state permit at the time of the action. 33 U.S.C. § 1365(a)(1). The only relief available is an injunction to stop the violation and/or an assessment of civil penalties payable to the U.S. Treasury. 33 U.S.C. § 1365(a); C.R.S. § 25-8-611 (violations of the State water pollution regulations, including the State NPDES regulations, "inure solely to, and shall be for the benefit of the people of [] the state generally, and it is not intended by this article, in any way, to create new rights or to enlarge existing private rights."); Gwaltney, 484 U.S. at 53, 108 S. Ct. at 379. The present action runs directly counter to these and other statutory restrictions on Clean Water Act citizen suits.

1. "A citizen suit may be brought only for a violation of a permit limitation 'which is in effect' under the act." Gwaltney, 484 U.S. at 59, 108 S. Ct. at 382 (emphasis added); 33 U.S.C. § 1365(f). The 1976 NPDES permit is no longer in effect. It expired in 1981. (Facts ¶ 64.)

2. Private actions are not permitted based on "wholly past violations" of the Act. Gwaltney, 484 U.S. at 64, 108 S. Ct. at 385. Any violation of the 1976 permit is wholly in

the past. The Termination Requirement which forms the basis of this claim required work to be completed within 2 years of Silver Bell's termination of operations at its mill. PacifiCorp has stipulated and pleaded that termination of operations occurred in 1975. (Facts ¶ 10.) Silver Bell submitted its plan for work to the State in 1977 and committed that work would be completed by October 1978. (Facts ¶ 55.) Silver Bell's alleged violation of the permit requirement was thus complete by the end of October 1978 when the work was not done. (Facts ¶ 55.)

3. The only citizen action authorized is one to enforce the permit and have penalties paid to the United States. 33 U.S.C. § 1365(a); Gwaltney, 484 U.S. at 53, 108 S. Ct. at 379. PacifiCorp has brought a private civil action for damages. This suit is absolutely barred. Board of Trustees v. Painesville, 200 F.3d 396 (6th Cir. 1999); Evansville v. Kentucky Liquid Recycling, Inc., 604 F. 2d 1008 (7th Cir. 1979), cert. denied, 444 U.S. 1025.

4. No citizen's suit may be brought under the Act unless and until the plaintiff has given 60 days notice of the alleged violation to the EPA, the State, and the alleged violator. 33 U.S.C. § 1365(b). Such notice is a mandatory condition precedent to suit. Nat'l Environmental Foundation v. ABC Rail Corp., 926 F.2d 1096 (11th Cir. 1991). No such notice was given before filing this action.

5. The statute of limitations on a citizen's suit (or a government enforcement action) under the Clean Water Act is 5 years. Public Interest Research Group v. Powell Duffryn Terminals Inc., 913 F.2d 64 (3d Cir. 1990), cert. denied, 498 U.S. 1109 (1991); United States v. Telluride Co., 146 F. 3d 1241, 1244-47 (10th Cir. (Colo.) 1998). Under the chronology of the 1976 permit described above, the statute of limitations would have started running sometime after 1975 (when Silver Bell ceased operations) and no later than 1981 (when the permit expired

by its terms). Almost twenty years have passed since the most recent of those dates. Any action under the permit is time barred.

B. If And When The State Transferred The Permit To MolyCorp, MolyCorp Did Not Assume Any Silver Bell Liability To The State. MolyCorp Became Responsible For Complying With The Permit, If At All, Only For The Nine Months It Held The Permit.

PacifiCorp claims, in essence, that transfer of an NPDES permit imposes retroactive liability on the new permittee, i.e., makes the new permittee liable for a prior permittee's violations of that permit. This is contrary to the law. A permittee's duty is limited to complying with the terms of the permit when, and only when, it holds the permit.

Federal regulations in force in March 1980 when MolyCorp filed its application for transfer of the permit make this explicit. 40 C.F.R. § 122.12(d) (1979) provided as follows:

A permit may be transferred to another person by a permittee if:

* * *

(2) a written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittees (including acknowledgment that the existing permittee is liable for violations up to that date, and that new permittee is liable for violations from that date on) is submitted to the director;

(Copy provided as Attachment M.) Current state and federal regulations confirm the same rule, in slightly different terms. They require a written agreement for transfer that specifies the date for "transfer of permit responsibility, coverage and liability." 5 CCR 1002-61 at 61.8(6)(b)(ii); 40 CFR § 122.61(b)(2). Under both the 1979 and current regulations, it is clear that, absent some contrary agreement (that must be stated in the agreement filed with the State), liability under a permit is limited to the time a party is the permittee. This is in accord with more general provisions of the regulations. See C.R.S. 25-8-601 *et seq.* (Colorado Water Quality Control Act,

specifying that person who violates permit is charged and punished; does not authorize charges against or punishment of subsequent permittee who did not commit violation); 5 CCR 1002-61 at § 61.6(b) at p. 56 ("If a permit is issued, it shall be issued *to the applicant* who shall be responsible for compliance with conditions of the permit."). There is no statutory or regulatory provision for retroactive liability under the Clean Water Act. Indeed, given the severe civil and criminal sanctions that can attach to a permit violation, as a matter of due process, the statute or regulations would have to provide express notice of retroactive permit liability if it were to attach.

There is very little case law on this issue, because regulators have not even tried to bring claims asserting retroactive liability. What there is leads to the same conclusion, i.e., a permittee is liable only for acts during its time as permittee. See Friends of the Earth v. Archer Daniels Midland Co., 1986 WL 13541, **4 (N.D.N.Y. 1986) (holding that a permittee is liable for permit violations that occurred while the permittee held the permit and the permittee could not escape liability by transferring the permit) (overruled on other issues by Gwaltney, *supra*) (Attachment N); U.S. v. Metropolitan Dist. Com'n., 1985 WL 9071, ** 12-15 (D. Mass.1985) (holding that, because standard successor liability rules (mere continuation) made subsequent permittee successor to the prior permittee, subsequent permittee had liability for prior permittee's acts) (Attachment O); United States v. Gulf States Steel, Inc., 54 F.Supp. 2d 1233, 1238 n. 2 (EPA did not seek to hold the current permittee liable for violations of the prior permittee, although reserving right to do so under standard successor liability rules). As a matter of law, Molycorp's liability would be limited to its actions and omissions during the period, if any, that it held the permit, and only for that period.

As indicated above, there is no record that MolyCorp filed the proper agreement to effect the transfer of this permit or that the State ever acted on MolyCorp's application for transfer, so MolyCorp may never have become the permittee. (Facts ¶ 58.) Assuming that the permit was transferred, MolyCorp's period of liability on the permit could be no greater than March 1980, when it signed the application for transfer, to December 1980, when Fleet Resources, which bought the remaining Silver Bell Ophir properties from Minerals and MolyCorp, signed its application for transfer of the same 1976 permit to Fleet. (Facts ¶¶ 63-64.)

C. The Application For Transfer Shows No Intent To Assume The Liabilities Of Any Prior Permittee.

PacifiCorp cannot show that the document MolyCorp submitted to the State shows any intent to assume the liability of Silver Bell, the prior permittee. To the contrary, the application for transfer form does not contain any language of assumption of such liabilities. It states very simply that the applicant – MolyCorp – has "reviewed this permit and accepts its terms in full." (Facts ¶ 58.) The case law presented above under the express or implied assumption exception (Section II) makes it clear that an assumption of another's obligations is a matter of contract, and requires clear language to that effect. No such language is present in this application for transfer. PacifiCorp cannot show any contract between MolyCorp and the State that MolyCorp would assume any liabilities of its predecessor.

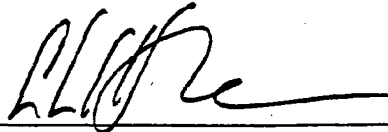
Equally, there is no basis from this application to suggest any contract between MolyCorp and Silver Bell that MolyCorp would assume Silver Bell liabilities. PacifiCorp can show no record of any negotiations between MolyCorp and Silver Bell on this issue. Indeed, by the time of MolyCorp's first communications with the State about the permit (November 29, 1979) and by

the time the application for transfer was sent to the State (March 10, 1980), Silver Bell had formally dissolved. (Facts ¶¶ 38, 56-58) Molycorp had no entity it could have contracted with.

As stated at the outset, Defendants strongly object to any claim based on Molycorp actions. Without waiving that objection, Defendants have addressed what they believe will be PacifiCorp's claim based on the permit so the Court will have the legal issues on the permit before it. But there are other major factual and legal issues not pleaded, subject to discovery, or briefed that would have to be addressed before the Court could even consider liability of the named defendants based on actions of a non-party affiliate.

DATED this 22nd day of January, 2001.

SHERMAN & HOWARD L.L.C.



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Ronald M. Eddy
Claire E. Douthit

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Attorneys for Defendants

CERTIFICATE OF MAILING

I certify that a true and correct copy of the foregoing **TRIAL BRIEF OF DEFENDANTS UNION OIL COMPANY OF CALIFORNIA AND MINERALS EXPLORATION COMPANY FOR PHASE 1 TRIAL** was sent by Federal Express delivery, on the 22nd day of January, 2001, to the following:

Kevin R. Murray
Bret F. Randall
136 South Main, Suite 1000
Salt Lake City, Utah 84101

and hand delivered on the 22nd day of January, 2001 to the following:

Gary E. Parish
R. Daniel Scheid
Eden C. Steele
633 Seventeenth Street, Suite 2000
Denver, Colorado 80202

William E. Wood

COLORADO BUREAU OF MINES

Museum Building

Denver 2, Colorado

Walter E. Scott, Jr.
Commissioner of Mines

Number 317

OPERATOR'S ANNUAL REPORT
METAL MINES

For the Year 1951

Name of Mine Carbonero County San Miguel
Address of local office Ophir, Colorado
Address of principal office 701 U. S. National Bank Building; Denver 2, Colorado
If incorporated, under laws of what state Colorado
President Eugene H. Sanders
Address 701 U. S. National Bank Building; Denver 2, Colorado
Vice President Eugene J. Nord
Address 4610 W. Lloyd; Milwaukee, Wisconsin
Secretary-Treasurer Edward G. O'Brien
Address 1214 W. Wisconsin Ave.; Milwaukee, Wisconsin
General Manager Eugene H. Sanders
Address 701 U. S. National Bank Building; Denver 2, Colorado
Name of person locally in charge A. A. Smith Title General Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____

Address _____

Principal products mined Complex sulfide ore
PRODUCTION, Tons 275 Value \$ 7,165.45
Tons _____ Value \$ _____
Tons _____ Value \$ _____

Name and survey number of patented claims:
Claims listed on separate sheet

(If necessary attach separate sheet listing claims) - Total acreage _____

Name of unpatented claims:
Claims listed on separate sheet

(If necessary attach separate sheet listing claims) Total acreage _____

Name of property owner Silver Bell Mines Co.
Address Ophir, Colorado

(over)

COLORADO BUREAU OF MINES

Page 2

Is property worked by owner Yes or by lessees in part
 Was all of property worked during year or only in part in part
 If part of property was subleased, give name and address of sublessees:
 Name _____
 Address _____
 Name _____
 Address _____
 Name _____
 Address _____
 Name _____
 Address _____

Is work done by any lessees included in this report no or do they make separate report showing production and shifts worked no
 Have you a mill or other reduction works, if so, what kind and type Silver Bell Mill
Flotation Mill Capacity, daily 150 monthly 4500

Total number of days mine operated during year 232
 Total number of man shifts underground 895
 Total number of man shifts on surface 464
 Total number of days mill operated 311
 Total number of man shifts worked in and around mill 2488

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements - exploration \$ 39,000.00
 Approximate cost of mine - mill operations \$ 20,000.00

- REMARKS -

Dated at Ophir, Colorado
February 25, 19 52

Signed: SILVER BELL MINES CO.
OPHIR, COLO.
BOX 393

By Melvin Carlson
 Title Resident Engineer

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 1952, as provided by Section 317, Volume 4, Chapter 110, 1935 Colorado Statutes Annotated.

CARBONERO MINING CLAIMS

PATENTED CLAIMS:

Boston Belle 16906	Gold Lilly	7777
Carbon 16906	Gold Lilly Extension	7777
Carbonero 16906	Gold Rose	7777
Carbonado 16906	Gold Rose Extension	7777
East Panama 19815	Gold Butte	7777
West Panama 19815	Gold Butte Extension	7777
Full Moon 20327	Gold Cliff	7777
Mohawk 1436	Gold Cliff Extension	7777
North Star 6905	Gold Corridor	7777
North Star Millsite 20302	Gold Corridor Extension	7777
Parnell 16986	Gold Crescent	7777
Attica Lode 16654	Gold Crescent Extension	7777
Und. 3/4 Iola No 1 18720	Gold Coin	7777
Und. 3/4 Iola No 2 18720	Gold Coin Extension	7777
Und. 3/4 Iola No 3 18720	Gold Corner	7777
Und. 3/4 Iola No 4 18720	Mon Bijou	4576
Und. 3/4 Iola No 5 18720	El Mundo	4611
	Little Eva	5978
	Bonita	5978
	Und. 15/16 Single Standard	4575

UNPATENTED CLAIMS:

Great View	Patented Claim Acreage	350.548 acres
Mowhawk No. 1		
Portland	Unpatented Claim Acreage	99.971 Acres
Vista		
Vindicator		
Vindicator No 1		
Calmet		
Cascade		
Farwell		
Carbonero Millsite		
Panama Mill site		
J.G.		

COLORADO BUREAU OF MINES
Museum Building
Denver 2, Colorado

Walter E. Scott, Jr.
Commissioner of Mines

Number 329

OPERATOR'S ANNUAL REPORT
METAL MINES
For the Year 19 52

Name of Mine Carbonero Mine County San Miguel
Name of Operator Silver Bell Mines Company
Address of local office Ophir, Colorado
Address of principal office 434 U. S. National Bank Building, Denver 2, Colorado
If incorporated, under laws of what state Colorado
President Eugene H. Sanders
Address 6 Crestmoor drive, Denver, Colorado
Vice President Eugene J. Nord
Address 4610 W. Lloyd; Milwaukee, Wisconsin
Secretary-Treasurer Edward G. O'Brien;
Address 1214 W. Wisconsin Ave.; Milwaukee, Wisconsin
General Manager Eugene H. Sanders
Address 6 Crestmoor Drive, Denver, Colorado

Name of person locally in charge A. A. Smith General Title Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____
Address _____

Principal products mined Complex sulfide ore

PRODUCTION, Tons	<u>5756 tons</u>	Value	<u>\$119,733</u>
Tons		Value	\$
Tons		Value	\$

Name and survey number of patented claims:

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

(If necessary, attach separate sheet listing claims)
(Only show claims patented since your last Report)

Total acreage 350.548 acres
(List total acreage each year)

(over)

COLORADO BUREAU OF MINES

Page 2

Name of unpatented claims:

Plumbum Lode

(If necessary, attach separate sheet listing claims)
(Only show claims located since your last Report)

Total acreage 111.971 acres
(List total acreage each year)

Name of property owner Silver Bell Mines Company
Address Ophir, Colorado

Is property worked by owner Yes or by lessees _____
Was all of property worked during year or only in part in part

If part of property was subleased, give name and address of sublessees:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

Is work done by any lessees included in this report no or do they make separate report showing production and shifts worked no
Have you a mill or other reduction works, or do you ship or sell your ore to a Custom Plant _____
We have our own mill.

Total number of days mine operated during year 238
Average number of men employed during year 12
Total number of man shifts underground 2,145
Total number of man shifts on surface 779

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements - exploration \$ 45,000 52,000
Approximate cost of mine - mill operations \$ 65,000 95,000

Signed:

Silver Bell Mines Company

Dated at Ophir, Colorado
Jan 22, 1953, 19____

By Melvin Carlson
Title Resident Engineer

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 19____, as provided by Section 317, Volume 4, Chapter 110, 1935 Colorado Statutes Annotated.

COLORADO BUREAU OF MINES
Museum Building
Denver 2, Colorado

Walter E. Scott, Jr.
Commissioner of Mines

Number 329

OPERATOR'S ANNUAL REPORT
METAL MINES
For the Year 1952

Name of Mine Camborne Mine County San Miguel
Name of Operator Silver Bell Mines Company
Address of local office Guthrie, Colorado
Address of principal office 434 W. S. National Bank Building, Denver 2, Colorado
If incorporated, under laws of what state Colorado
President Frederic H. Sanders
Address 5 West 40th Ave., Denver, Colorado
Vice President Harold J. Ward
Address 451 W. Lloyd, Milwaukee, Wisconsin
Secretary-Treasurer Harold J. Ward
Address 121 W. Wisconsin Ave., Milwaukee, Wisconsin
General Manager Frederic H. Sanders
Address 5 West 40th Ave., Denver, Colorado

Name of person locally in charge A. A. Smith Title General Superintendent

If partnership, give name and address of partners:

Name

Address

Name

Address

Name

Address

Name

Address

If individual, name

Address

Principal products mined Complex sulfide ore

PRODUCTION, Tons	<u>2754 tons</u>	Value \$	<u>19,733</u>
Tons		Value \$	
Tons		Value \$	

Name and survey number of patented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims patented since your last Report)

Total acreage

350.55 acres
(List total acreage each year)

COLORADO BUREAU OF MINES

Page 2

Name of unpatented claims:

Plumbum Lode

(If necessary, attach separate sheet listing claims) Total acreage 111.971 acres
(Only show claims located since your last Report) (List total acreage each year)

Name of property owner Silver Bell Mines Company
Address Ophir, Colorado

Is property worked by owner Yes or by lessees _____
Was all of property worked during year or only in part in part

If part of property was subleased, give name and address of sublessees:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

Is work done by any lessees included in this report no or do they make separate report showing production and shifts worked no
Have you a mill or other reduction works, or do you ship or sell your ore to a Custom Plant _____
We have our own mill.

Total number of days mine operated during year 238
Average number of men employed during year 12
Total number of man shifts underground 2,145
Total number of man shifts on surface 779

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements - exploration \$ 45,000 52,000
Approximate cost of mine - mill operations \$ 63,000 95,000

Signed:

Silver Bell Mines Company

Dated at Ophir, Colorado
Jan 22, 1953, 19____

By Merwin Carlson
Title Resident Engineer

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 19____, as provided by Section 317, Volume 4, Chapter 110, 1935 Colorado Statutes Annotated.

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COLORADO BUREAU OF MINES
Museum Building
Denver 2, Colorado

Walter R. Scott, Jr.
Commissioner of Mines

Number 369

OPERATOR'S ANNUAL REPORT METAL MINES For the Year 1953

Name of Mine Carmenara County San Miguel
Name of Operator Silver Bell Mines Company
Address of local office Ophir, Colorado
Address of principal office 434 W. S. National Bank Building, Denver 2, Colorado
If incorporated, under laws of what state Colorado
President Eugene W. Sanders
Address 6 Crestmoor Drive, Denver, Colorado
Vice President Eugene J. Nord
Address 1610 W. Lloyd Ave. Milwaukee, Wisconsin
Secretary-Treasurer Edward C. O'Brien
Address 1214 W. Wisconsin Ave. Milwaukee, Wisconsin
General Manager Eugene W. Sanders
Address 6 Crestmoor Drive, Denver, Colorado

Name of person locally in charge A. A. Smith Title General Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____
Address _____

Principal products mined Complex sulfide ore

PRODUCTION, Tons	Value \$
<u>14,195 tons</u>	<u>221,712</u>
Tons	Value \$
Tons	Value \$

Is work done by any lessees included in this report no or do they make separate report showing production and shifts worked no

Have you a mill or other reduction works, or do you ship or sell your ore to a custom plant We have our own mill.

Total number of days mine operated during year 291 days
Average number of men employed during year 15 men
Total number of man shifts underground 350 man shifts
Total number of man shifts on surface 128 man shifts

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements - exploration \$ 17,000.00
Approximate cost of mine - mill operations \$ 129,300.00

(over)

Name and survey number of patented claims:

(If necessary, attach separate sheet listing claims) Total acreage: 350.546 acres
 (Only show claims patented since your last Report) (List total acreage each year)

Name of unpatented claims:

<u>Captiva Lode</u>	
<u>Aurum Lode</u>	

(If necessary, attach separate sheet listing claims) Total acreage: 153.291 acres
 (Only show claims located since your last Report) (List total acreage each year)

Name of property owner: Silver Bell Mines Company
 Address: Ophir, Colorado

Is property worked by owner: Yes or by lessees: in part
 Was all of property worked during year or only in part: in part

If part of property was subleased, give name and address of sublessees:

Name	
Address	
Name	
Address	
Name	
Address	
Name	
Address	

Signed: Silver Bell Mines Company

Dated at: Ophir, Colorado
March 1, 1954 1954

By: William Carlson
 Title: Field Engineer

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 19____, as provided by Section 317, Volume 4, Chapter 110, 1935 Colorado Statutes Annotated.

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COLORADO BUREAU OF MINES
Museum Building
Denver 2, Colorado

Walter E. Scott, Jr.
Commissioner of Mines

Number 369

OPERATOR'S ANNUAL REPORT
METAL MINES
For the Year 1953

Name of Mine Carbenero County San Miguel
Name of Operator Silver Bell Mines Company
Address of local office Ophir, Colorado
Address of principal office 134 U. S. National Bank Building, Denver 2, Colorado
If incorporated, under laws of what state Colorado
President Eugene H. Sanders
Address 6 Crestmoor Drive, Denver, Colorado
Vice President Eugene J. Nord
Address 4610 W. Floyd Ave. Milwaukee, Wisconsin
Secretary-Treasurer Edward G. O'Brien
Address 1214 W. Wisconsin Ave. Milwaukee, Wisconsin
General Manager Eugene H. Sanders
Address 6 Crestmoor Drive, Denver, Colorado
General
Name of person locally in charge A. A. Smith Title Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____
Address _____

Principal products mined Complex sulfide ore

PRODUCTION, Tons	<u>14,196 tons</u>	Value \$	<u>221,712</u>
Tons		Value \$	
Tons		Value \$	

Is work done by any lessees included in this report no or do they make separate report showing production and shifts worked no

Have you a mill or other reduction works, or do you ship or sell your ore to a Custom Plant _____
We have our own mill.

Total number of days mine operated during year 291 days
Average number of men employed during year 15 men
Total number of man shifts underground 3150 man shifts
Total number of man shifts on surface 1289 man shifts

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements - exploration \$ 17,000.00
Approximate cost of mine - mill operations \$ 129,300.00

(over)

COLORADO BUREAU OF MINES

Page 2

Name and survey number of patented claims:

(If necessary, attach separate sheet listing claims) Total acreage 350.548 acres
 (Only show claims patented since your last Report) (List total acreage each year)

Name of unpatented claims:

<u>Cuprum Lode</u>		
<u>Aurum Lode</u>		

(If necessary, attach separate sheet listing claims) Total acreage 153.291 acres
 (Only show claims located since your last Report) (List total acreage each year)

Name of property owner Silver Bell Mines Company
 Address Ophir, Colorado

Is property worked by owner Yes or by lessees in part
 Was all of property worked during year or only in part in part

If part of property was subleased, give name and address of sublessees:

Name	
Address	
Name	
Address	
Name	
Address	
Name	
Address	

Signed:

Silver Bell Mines Company

By Melvin Carlson

Title Field Engineer

Dated at Ophir, Colorado
March 1, 1954, 19

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 19 , as provided by Section 317, Volume 4, Chapter 110, 1935 Colorado Statutes Annotated.

350.548 acres

153.291 acres

Silver Bell Mines Company
Ophir, Colorado

yes

in part

Ophir, Colorado
March 12, 1955

Silver Bell Mines Company

Melvin Carlson
Field Engineer

CARBONERO MINING CLAIMS

PATENTED CLAIMS:

Boston Belle 16906	Gold Lilly	7777
Carbon 16906	Gold Lilly Extension	7777
Carbonero 16906	Gold Rose	7777
Carbonado 16906	Gold Rose Extension	7777
East Panama 19815	Gold Butte	7777
West Panama 19815	Gold Butte Extension	7777
Full Moon 20327	Gold Cliff	7777
Mohawk 1436	Gold Cliff Extension	7777
North Star 6905	Gold Corridor	7777
North Star Millsite 20302	Gold Corridor Extension	7777
Parnell 16986	Gold Crescent	7777
Attica Lode 16654	Gold Crescent Extension	7777
Und. 3/4 Iola No 1 18720	Gold Coin	7777
Und. 3/4 Iola No 2 18720	Gold Coin Extension	7777
Und. 3/4 Iola No 3 18720	Gold Corner	7777
Und. 3/4 Iola No 4 18720	Mon Bijou	4576
Und. 3/4 Iola No 5 18720	El Mundo	4611
	Little Eva	5978
	Bonita	5978
	Und. 15/16 Single Standard	4575

UNPATENTED CLAIMS:

Great View	Patented Claim Acreage	350.548 acres
Mohawk No. 1		
Portland	Unpatented Claim Acreage	99.971 Acres
Vista		
Vindicator		
Vindicator No 1		
Calmet		
Cascade		
Farwell		
Carbonero Millsite		
Panama Mill site		
J.G.		

Copy of the Colorado Bureau of Mines Report for the year 1954
Carbonero Mine Report No ~~42~~ 423

633 U. S. National Bank Building; Denver 2, Colorado
Colorado

Eugene H. Sanders
6 Crestmoor Drive; Denver, Colorado
Eugene J. Nord
4610 W. Lloyd; Milwaukee, Wisconsin
Edward G. O'Brien
1214 W. Wisconsin Ave.; Milwaukee, Wisconsin
Eugene H. Sanders
6 Crestmoor Drive; Denver, Colorado

A. A. Smith General
Superintendent

Complex sulfide ore

19,088 tons

\$270,430

no

no

We have our own Mill.

283 days

14 men

2083 man shifts

1787 man shifts

THIS COPY FOR YOUR FILES

COLORADO BUREAU OF MINES

Museum Building
Denver 2, ColoradoWALTER E. SCOTT, JR.
COMMISSIONER OF MINES

Number 249

OPERATOR'S ANNUAL REPORT

METAL MINES

For the Year 1955

Name of Mine Carbonero Mine County San Miguel
Location Ophir Colorado District Iron Springs
Name of Operator Silver Bell Mines Company
Address of local office Ophir, Colorado
Address of principal office 633 U.S. National Bank Building, Denver 2, Colorado
If incorporated, under laws of what state Colorado
President Eugene H. Sanders
Address 6 Crestmoor Drive, Denver, Colorado
Vice President Eugene J. Nord
Address 4610 W. Lloyd Ave. Milwaukee, Wisconsin
Secretary-Treasurer Edward G. O'Brien
Address 1214 W. Wisconsin Ave. Milwaukee, Wisconsin
General Manager Eugene H. Sanders
Address 6 Crestmoor Drive, Denver, Colorado
Name of person locally in charge A.A. Smith Title General Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____

Address _____

Principal products mined None, down because of low metal prices

PRODUCTION, Tons	<u>00</u>	Value \$	
Tons		Value \$	
Tons		Value \$	

Is work done by any lessees included in this report _____, or do they make separate report showing production and shifts worked _____

Have you a mill or other reduction works, or do you ship or sell your ore to a Custom Plant _____

We have our own mill

Total number of days mine operated during year None
Average number of men employed during year None
Total number of man shifts underground None
Total number of man shifts on surface None

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements—explorations \$ None
Approximate cost of mine—mill operations \$ _____

(over)

COLORADO BUREAU OF MINES

Page 2

Name and survey number of patented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims patented since your last Report)

Total acreage 350.528
(List total acreage each year)

Name of unpatented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims located since your last Report)

Total acreage 153.291
(List total acreage each year)

Name of property owner Silver Bell Mines Company

Address Ophir, Colorado

Is property worked by owner yes or by lessees

Was all of property worked during year or only in part none

If part of property was subleased, give name and address of sublessees:

Name	
Address	
Name	
Address	
Name	
Address	
Name	
Address	

Signed:

Dated at Ophir, Colorado

By

January 25 1956

Title

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 1956, as provided by Colorado Statutes.

350.548 acres

153.291 acres

Silver Bell Mines Company
Ophir, Colorado

yes

in part

Ophir, Colorado

March 12, 1955

Silver Bell Mines Company

Melvin Carlson
Field Engineer

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COLORADO BUREAU OF MINES

Museum Building
Denver 2, Colorado

WALTER E. SCOTT, JR.
COMMISSIONER OF MINES

Number 249

OPERATOR'S ANNUAL REPORT

METAL MINES

For the Year 1955

Name of Mine Carbonero Mine County San Miguel
Location Ophir Colorado District Iron Springs
Name of Operator Silver Bell Mines Company
Address of local office Ophir, Colorado
Address of principal office 633 U.S. National Bank Building, Denver 2, Colorado
If incorporated, under laws of what state Colorado
President Eugene H. Sanders
Address 6 Crestmoor Drive, Denver, Colorado
Vice President Eugene J. Nord
Address 4610 W. Lloyd Ave. Milwaukee, Wisconsin
Secretary-Treasurer Edward G. O'Brien
Address 1211 W. Wisconsin Ave. Milwaukee, Wisconsin
General Manager Eugene H. Sanders
Address 6 Crestmoor Drive, Denver, Colorado
Name of person locally in charge A.A. Smith Title General Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____

Address _____

Principal products mined None, down because of low metal prices

PRODUCTION, Tons	<u>00</u>	Value \$	_____
Tons	_____	Value \$	_____
Tons	_____	Value \$	_____

Is work done by any lessees included in this report _____ or do they make separate report showing production and shifts worked _____

Have you a mill or other reduction works, or do you ship or sell your ore to a Custom Plant _____

We have our own mill

Total number of days mine operated during year None
Average number of men employed during year None
Total number of man shifts underground None
Total number of man shifts on surface None

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements—explorations \$ None

Approximate cost of mine—mill operations \$ _____

(over)

COLORADO BUREAU OF MINES

Page 2

Name and survey number of patented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims patented since your last Report)

Total acreage 350.898
(List total acreage each year)

Name of unpatented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims located since your last Report)

Total acreage 153.291
(List total acreage each year)

Name of property owner Silver Bell Mines Company

Address Ophir, Colorado

Is property worked by owner yes or by lessees

Was all of property worked during year or only in part none

If part of property was subleased, give name and address of sublessees:

Name

Address

Name

Address

Name

Address

Name

Address

Signed:

Dated at Ophir, Colorado By

January 25 1956 Title

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 1956, as provided by Colorado Statutes.

COLORADO BUREAU OF MINES

Museum Building
Denver 2, Colorado

WALTER E. SCOTT, JR.
COMMISSIONER OF MINES

Number 037

OPERATOR'S ANNUAL REPORT METAL MINES For the Year 19 51

Name of Mine Badger and Carbenero County San Miguel
Location Badger Tunnel 3.5 miles S. of Silver Mt. 7 miles NE of DENVER Post Office District Terr. Springs
Name of Operator Silver Bell Mines Company
Address of local office OPH.R., Colorado
Address of principal office Silver Bell Mines Co. Mile High Center Denver, Colo.
If incorporated, under laws of what state Colorado
President Eugene H. Sanders
Address 6 Chestmore Drive, Denver, Colorado
Vice President Eugene J. Nord
Address 4610 W. Lloyd Ave. Milwaukee Wisconsin
Secretary-Treasurer Edward G. O'Brien
Address 1214 W. Wisconsin Ave. Milwaukee, Wisconsin
General Manager Eugene H. Sanders
Address 6 Chestmore Drive, Denver Colorado
Name of person locally in charge Lesley E. Smith Title Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____
Address _____

Principal products mined Lead Zinc Silver Copper Gold

PRODUCTION, Tons	Value \$
<u>None</u>	
Tons	Value \$
Tons	Value \$

Is work done by any lessees included in this report _____ or do they make separate report showing production and shifts worked _____

Have you a mill or other reduction works, or do you ship or sell your ore to a Custom Plant.
We Have our own Mill

Total number of days mine operated during year Badger 48 days Carbenero 35 days
Average number of men employed during year Badger 2 Carbenero 2
Total number of man shifts underground Badger 34 Carbenero 30
Total number of man shifts on surface Badger 38 Carbenero 36
(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements—explorations \$ Badger mine 3,363.00 Carbenero mine 474.50
Approximate cost of mine—mill operations \$ Badger mine 3,363.00 Carbenero mine 474.50

(over)

COLORADO BUREAU OF MINES

Page 2

Name and survey number of patented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims patented since your last Report)

Total acreage None added
(List total acreage each year)

Name of unpatented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims located since your last Report)

Total acreage None added
(List total acreage each year)

Name of property owner Silver Bell Mines Co.

Address Box 693 OAHIM Colo

Is property worked by owner Yes or by lessees

Was all of property worked during year or only in part in part

If part of property was subleased, give name and address of sublessees:

Name	
Address	
Name	
Address	
Name	
Address	
Name	
Address	

Signed:

Dated at _____ By _____

19 _____ Title _____

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 1958, as provided by Colorado Statutes.

COLORADO BUREAU OF MINES

Museum Building
Denver 2, Colorado

WALTER E. SCOTT, JR.
COMMISSIONER OF MINES

Number 437

OPERATOR'S ANNUAL REPORT

METAL MINES
For the Year 19 57

Name of Mine Badger and Carbenero County San Miguel
Location (Badger Tunnel) 3.51/2 of Silver Mt. 1 1/2 Mi. E. of Ophir Post office. Carbenero 1/2 S. Slope of Silver Mt. 7 Miles NE of Ophir Post office District Larn Springs
Name of Operator Silver Bell Mines Company
Address of local office OPHIR, Colorado
Address of principal office Silver Bell Mines Co. Mile High Center Denver, Colo
If incorporated, under laws of what state Colorado
President Eugene H. Sanders
Address 6 Crestmore Drive, Denver, Colorado
Vice President Eugene J. Nord
Address 4610 W. Loyd Ave. Milwaukee Wisconsin
Secretary-Treasurer Edward G. O'Brien
Address 1214 W. Wisconsin Ave. Milwaukee, Wisconsin
General Manager Eugene H. Sanders
Address 6 Crestmore Drive, Denver Colorado
Name of person locally in charge Lesley E. Smith Title Superintendent

If partnership, give name and address of partners:

Name _____
Address _____
Name _____
Address _____
Name _____
Address _____
Name _____
Address _____

If individual, name _____
Address _____

Principal products mined Lead Zinc Silver Copper Gold

PRODUCTION, Tons	Value \$
<u>None</u>	
Tons	Value \$
Tons	Value \$

Is work done by any lessees included in this report _____ or do they make separate report showing production and shifts worked _____

Have you a mill or other reduction works, or do you ship or sell your ore to a Custom Plant _____

We Have Our Own Mill

Total number of days mine operated during year Badger 45 days Carbenero 35 days

Average number of men employed during year Badger 2 Carbenero 2

Total number of man shifts underground Badger 39 Carbenero 30

Total number of man shifts on surface Badger 38 Carbenero 36

(Note: Man shifts are the total number of men employed times each 8-hour shift they worked)

Approximate cost of new improvements—explorations \$ Badger Mine 3,363.00 Carbenero Mine 474.50

Approximate cost of mine—mill operations \$ Badger Mine 3,363.00 Carbenero Mine 474.50

(over)

COLORADO BUREAU OF MINES

Page 2

Name and survey number of patented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims patented since your last Report)

Total acreage None added
(List total acreage each year)

Name of unpatented claims:

(If necessary, attach separate sheet listing claims)
(Only show claims located since your last Report)

Total acreage None added
(List total acreage each year)

Name of property owner Silver Bell Mines Co.

Address Box 693 Ophir Colo

Is property worked by owner Yes or by lessees

Was all of property worked during year or only in part in part

If part of property was subleased, give name and address of sublessees:

Name

Address

Name

Address

Name

Address

Name

Address

Signed:

Dated at By

19 Title

Blanks must be completely filled out and returned to COLORADO BUREAU OF MINES on or before March 1, 1958, as provided by Colorado Statutes.

STATE OF COLORADO
BUREAU OF MINES
STATE SERVICES BUILDING
Denver 2, Colorado

G. A. FRANZ, JR.
DEPUTY COMMISSIONER

THIS COPY FOR YOUR FILES

Number 532
County San Miguel
Mining District 4

OPERATOR'S ANNUAL REPORT
for the Year 1959

Name of Operation CARBONERO, Redwing Silver Mine Kind of Operation Mine & Mill
(Mine, Mill, Quarry, etc.)

Operators Silver Bell Mines Co. Ownership (☒) Lease () Contractor ()

Address (Local) Ophir Main Office Address 326 Patterson Bldg., Denver, Colo.

Owner Silver Bell Mines Co. Owner Address Same as Above

Location of Property San Miguel County, Ophir to Twin Springs Mining District T. 42N. R. 70W.
N.M.P.M. Sections 25-26-27-28-33-34-35-36

Corporation (☒) Partnership () Individual ()
If a corporation, give name of state in which incorporated Colorado

President Eugene H. Sanders, Denver Partner or Individual

Vice-President Eugene J. Nord Partner
Milwaukee, Wis.

Secretary John W. Metzger, Denver Partner

Treasurer John W. Metzger, " Partner

Manager Lesley E. Smith Address Box 694 Ophir, Colo.
or Person in Charge Telephone Number 168

Producing () Developing () Prospecting () Part Time (X) Idle ()

Principal Products PB, ZN, AU, AG, CU.

Production for the Year

Crude Tonnage (tons, yards, pounds) Produced during the Year None Value \$ None

List products separately, i.e., Gold, Silver, Copper, Lead, Zinc, or other minerals, Clay, Sand, Gravel, Stone, etc.

Product	(oz., lbs., tons)	Value \$
Product	(oz., lbs., tons)	Value \$
Product	(oz., lbs., tons)	Value \$
Product	(oz., lbs., tons)	Value \$
Product	(oz., lbs., tons)	Value \$

Labor Statistics

Number of Days Operated during the Year 310 Average No. of Men Employed: Surface 1 Undergd. 2

Number of Man-shifts (8 hours each) during the Year: Surface 240 Underground 146

Number of Lost-time accidents during the Year None Man-hours worked 3,088

Compensation Insurance Carrier State Compensation Insurance Fund

Total Number of Patented Claims Ninety (90) Total Acreage 1,304.77

Total Number of Unpatented Claims Nine (9) Total Acreage Approx. 1,170

(All Patented and Unpatented Claims which have not been shown on previous reports should be listed on the reverse side of this sheet or on a separate sheet.)

Date of this report Jan 1960 Signed Silver Bell Mines Co.

By: Lesley E. Smith

Title Superintendent

This report must be submitted to the Colorado Bureau of Mines by March 1, 1960.

SEMI MONTHLY ENGINEERING REPORT

PERIOD JANUARY 1-15, 1951

BRUNTON SURVEYS:

Drift Ida 14 W
Drift Ida 13 E
Drift Butler 13 E
Drift Butler 12 E

OFFICE:

Stope and progress maps brought up to date as of Jan. 1, 1951
Carbonero tunnel costs, etc.
Court House - county records for descriptions of
Carbonero unpatented claims.
Semi monthly report.

Don E. Ferguson

SEMI MONTHLY OPERATING REPORT

PERIOD MARCH 16-31, 1951

TRAMMED ORE:

St 1 But	Rs 175 But 14 W	Rs 165 Ida 14 W	Rs 275	St 85 Ida
14 W Trf	Dr Butler 12 W	St 115 Ida 11 W	Ida 12 W	13 E
Dr But 12	St 1 But 12 W	St 165 Ida 13 W		
E. St 90		St 100 Ida 12 W		
But 13 E				

Cars	167	51	247	238	13
%	9.63	2.94	14.24	13.73	0.75
Value	\$3.00	5.03	3.50	6.04	

St 760	St 670 Ida	St 250	Ida Raise	St 450 Ida	Dr Ida 14 W
But 14 W	14 W Trf	Ida 14 E		14 W Trf	

Cars	482	152	36	5	134	209
%	27.80	8.77	2.08	0.29	7.73	12.05
Value	\$6.07				5.65	1.26

Total Cars: 1734
Daily Average: 123.86

WASHING PLANT:

Cars waste sorted: 309
Per cent of ore trammed to plant: 17.82

TONS MILLED:

Period	To Date	Assays	Per Ton	Period	To Date
		Au 0.052	\$1.82		
		Ag 2.759	2.48		
		Pb 0.416	1.41		
		Cu 0.127	0.62		
1,519	9,376	Gross	\$6.33	\$9,615	\$56,313
		Net	4.30	6,532	38,274

(Current metal quot. N.Y.: Au \$35, Ag 90¢, Pb 17¢, Cu 24½¢)

DRIFTING:

Drift Ida 14 W	Advance	43.5 feet
Drift Ida 13 E	"	24.5 "
Drift Ida 12 W	"	30.0 "
Drift Butler 12 E	"	18.0 "
Drift Butler 12 W	"	17.5 "
Drift Butler 13 W	"	38.0 "
		<u>171.5</u>

STOPING:

St 100 Ida 12 W	Advance	22.2 Fathoms
St 610 Ida 12 W	"	11.8 "
St 220 Ida 13 E	"	49.2 "
St 85 Ida 13 E	"	" -
St 90 Butler 13 E	"	4.3 "
		<u>67.5</u>

23 feet finger raise

TIMBERING:

St 1 Butler 12 W	Timber sets advance	58.5 feet
	Chutes	7.0
Raise 885 Ida 14 W	"	1.0
Raise 415 Ida 14 E	"	1.0

MILL OPERATION:

B all Mill grinding time 276.42 hrs, 71.98 % efficiency.

CONCENTRATE INVENTORY:

In cars Lot No 94 approx 25.38 tons, value \$8,246 Gross, \$6,550 Net

CONCENTRATE SHIPMENTS:

No shipments made during this period.

ORE INVENTORIES:

St 115 Ida 11 W	Empty	\$
St 100 Ida 12 W	1,587 tons	\$5.65 per ton
St 165 Ida 13 W	Empty	
St 610 Ida 13 W	Empty	
St 85 Ida 13 E	2,500	4.28
St 220 Ida 13 E	750	6.00
St 610 Ida 12 W	329	5.65
St 250 Ida 14 W	711	6.00
St 375 Butler 13 W	262	6.85
St 760 Butler 14 W	1,490	6.95
In transfers	1,477	
	9,106 Tons	value \$5.43 per ton, \$49,446 Gross.

Tungsten in course bin

24 Tons (No domestic quotations)

GROSS PAYROLL:

\$10,492.82

OCCUPATIONAL GROUPS:

Underground	34	Admin. and Superv.	3
Outside	7	Assaying	1
Mill	7	Engineering	1
Tailings pond	2	Office	1
Carbonero	1		6
	51		

Total 57

SILVER BELL MINES CO.

A. A. Smith
A. A. Smith, Gen. Sup't

SEMI MONTHLY OPERATING REPORT

PERIOD APRIL 1-15, 1951

TRAMMED ORE:

St 1 But	Rs 175 But 14 W	St 760 But	Rs 400 Ida	Rs 165 Ida
14 Trf	Dr But 12 W	14 W	14 E	14 W
Dr But 12 E	St 1 But 12 W	Dr But 13		St 100 Ida
St 1 But		W		12 W
12 W				

Cars	74	98	135	44	77
%	5.47	7.24	9.97	3.25	5.69
Value	\$7.49	346	4.91		2.30

Rs 275 Ida	St 450 Ida	St 670 Ida	St 85 Ida	St 250 Ida
14 W	14 W Trf.	14 Trf	13 E	14 W

Cars	116	264	277	76	65
%	8.57	19.50	20.46	5.61	6.35
Value	5.47	3.10	6.27	4.94	

Rs 885 Ida	Drift Ida	Ida Raise
14 W	14 W	

Cars	15	86	27
%	1.11	6.35	1.99
Value			

Total Cars: 1,354
Daily average: 112.83

WASHING PLANT:

Cars waste sorted: 276
Per cent of ore trammed to plant: 20.38

TONS MILLED:

Period	To Date	Assays	Per Ton	Period	To Date
		Am 0.037	\$1.30		
		Ag 2.939	2.65		
		Pb 0.432	1.47		
		Cu 0.088	0.43		
997	10,273	Gross	\$5.85	\$5,832	\$62,145
		Net	3.98	3,968	42,242

(Current metal quotations N.Y.; Au \$35, Ag 90¢, Pb 17¢, Cu 24½¢)

DRAFTING:

Drift Ida 14 W	Advance	24.5 feet
Drift Ida 12 W	"	26.5 "
Drift Butler 12 E	"	8.5 "
Drift Butler 12 W	"	12.5 "
Drift Butler 13 W	"	44.5 "
		<u>116.5</u>

STOPING:

St 100 Ida 12 W	Advance	13.2 fathoms
St 610 Ida 12 W	"	29.0 "
St 220 Ida 13 E	"	15.1 "
		<u>57.3</u>

TIMBERING:

St 730 Ida 12 W	Timber sets	Advance	5.0 feet
St 1 Butler 12 W	"	"	56.0 "
	Chutes	"	5.0 5.0
Rs 885 Ida 14 W	"	"	1.0
Rs 400 Ida 14 E	"	"	1.0

MILL OPERATION:

Ball mill grinding time 180 hrs., 50% efficiency.

CONCENTRATE INVENTORY:

In cars Lot No 95 approx, 1.62 tons, value \$325 Gross, \$245 Net.

CONCENTRATE SHIPMENTS:

Lot No. 94 April 14, approx. 43 tons, value \$13,511 Gross, \$10,716 Net.

ORE INVENTORIES:

St 100 Ida 12 W	1,712 tons	\$5.64
St 610 Ida 12 W	599 "	5.47
St 85 Ida 13 E	2,460 "	4.32
St 220 Ida 13 E	840 "	6.00
St 250 Ida 14 W	796 "	6.00
St 375 Butler 13 W	262 "	6.85
St 760 Butler 14 W	1,515 "	6.36
In transfers	1,167	
	<u>9,351 tons</u>	value 5.48 per ton, \$51,243 Gross.

Tungsten ore in
coarse bin.

24 tons, value \$128.96 per ton \$3,095 Gross.

GROSS PAYROLL:

\$8,556.24

OCCUPATIONAL GROUPS:

Underground	34
Outside	7
Mill	7
Tailings pond	2
Carbonero	2
Admin and Superv	3
Assay	1
Engineering	1
Office	1
	<hr/>
	58 Total

SILVER BELL MINES CO.


A. A. Smith, Gen. Sup't.

SEMI MONTHLY OPERATING REPORT

PERIOD APRIL 16-30, 1951

TRAMMED ORE:

	St 1 But 14 W Trf	Rs 175 But 14 W	St 760 But 14 W	St 920 But 14 W	Rs 400 Ida 14 E
Cars	211	153	159	96	12
%	15.26	11.05	11.49	6.94	0.87
Value	\$5.91	2.58	4.67		

	Rs 885 Ida 14 W	Rs 165 Ida 14 W	Rs 275 Ida 14 W	St 450 Ida 14 W Trf	St 670 Ida 14 W Trf
Cars	38	273	9	118	38
%	2.75	19.73	0.65	8.53	2.75
Value		2.62		4.41	9.20

	St 85 Ida 13 E	St 250 Ida 14 E	Drift Ida 14 W
Cars	41	159	77
%	2.96	11.49	5.56
Value	3.07	6.05	4.71

Total cars: 1,384
Daily average: 106.46

WASHING PLANT:

Cars waste sorted: 217
Per cent of trammed ore: 15.68

TONS MILLED:

Period	To Date	Assays	Per Ton	Period	To Date
		Au 0.050	\$1.75		
		Ag 3.161	2.85		
		Pb 0.536	1.82		
		Cu 0.114	0.56		
1,122	11,295	Gross	\$6.98	\$7,832	\$69,977
		Net	4.75	5,330	47,572

(Current metal quot. N.Y.; Au \$35, Ag 90.16¢, Pb 17¢, Cu 24½¢)

DRIFTING:

Drift Ida 12 W	Advance	24.0 feet
Drift Ida 14 W	"	26.0 "
Drift Butler 12 W	"	8.0 "
Drift Butler 13 W	"	53.5 "
Drift Butler 13 E	"	10.0 "
		<u>121.5</u>

STOPING:

St 610 Ida 12 W	Advance	19.8 fathoms
St 220 Ida 13 E		15.2 "
St 1 Butler 12 W		15.2 "
		<u>50.2</u>

RAISING:

Rs 885 Ida 14 W	Ore pass	Advance	11.0 feet
	Manway	"	13.0 "
	Timber	"	7.5 "

TIMBERING:

St 730 Ida 12 W	Timber sets	Advance	27.5 feet
	Chutes	"	2.0
St 920 Butler 14 W	Chute pockets	"	5.0

MILL OPERATION:

Ball mill grinding time 189.75 hrs., 52.71 per cent efficiency.

CONCENTRATE INVENTORY:

In cars Lot No. 95 approx. 28.02 tons, value \$7,268 Gross \$5,912 Net.

CONCENTRATE SHIPMENTS:

No shipments were made during this period.

ORE INVENTORIES:

St 1 Butler 12 W	145	Tons	\$6.33
St 100 Ida 12 W	1,435		5.56
St 610 Ida 12 W	735		5.47
St 85 Ida 13 E	2,393		4.30
St 220 Ida 13 E	1,010		6.00
St 250 Ida 14 E	677		10.01
St 375 Butler 13 W	262		6.85
St 760 Butler 14 W	1,485		5.48
In transfers	1,239		

9,381 Tons Value \$5.65 per ton, \$53,003 Gross.
 Tungsten in course bin 24 Tons Value \$128.96 per ton \$3,095 Gross.

OCCUPATIONAL GROUPS:

Underground	31
Outside	7
Mill	5
Tailings pond	1
Carbonero	2
Admin. and superv.	3
Assaying	1
Engineering	1
Office	1
Total	52

GROSSPAYROLL:

\$8,377.98

SILVER BELL MINES CO.

A.A. Smith
 A.A. Smith, Gen. Sup't.

SEMI MONTHLY OPERATING REPORT

PERIOD MAY 1-15, 1951

TRAMMED ORE:

	St 1 But 14 W Trf	Rs 175 But 14 W	St 760 But 14 W	St 920 But 14 W	Rs 400 Ida 14 E
Cars	425	111	19	22	3
%	28.43	7.25	1.24	1.44	0.20
Value	\$3.51	4.43			

	Rs 885 Ida 14 W	Rs 165 Ida 14 W	Rs 275 Ida 14 W	St 670 Ida 14 W	Drift Ida 14 W
Cars	82	397	17	24	157
%	5.36	25.95	1.11	1.57	10.26
Value	\$1.57	2.02			3.33

	St 85 Ida 13 E	St 250 Ida 14 E
Cars	36	237
%	2.35	15.49
Value		5.08

Total cars: 1,530
Daily average: 117.69

File SEMCO

WASHING PLANT:

Cars of waste sorted: 223
Per cent of trammed ore: 14.58

TONS MILLED:

Period	To Date	Assays	Per Ton	Period	To Date
		Au 0.017	\$0.60		
		Ag 2.798	2.52		
		Pb 0.423	1.44		
		Cu 0.077	0.38		
1,491	12,886	Gross	\$4.94	\$7,366	\$77,343
		Net	3.36	5,010	52,582

(Current metal quot. N.Y.; Au \$35, Ag 90.16¢, Pb 17¢, Cu 24½¢)

DRIFTING:

Drift Ida 12 W	Advance	29.5 feet
Drift Ida 14 W	"	55.5 "
Drift Butler 12 W	"	17.0 "
Drift Butler 13 W	"	60.5 "
Drift Butler 13 E	"	31.0 "
Drift Butler 12 E	"	16.5 "
		<u>210.0 feet</u>

STOPING:

St 610 Ida 12 W	Advance	22.6 fathoms
St 220 Ida 13 E		33.0 "
St 1 Butler 12 W		7.7 "
		<u>63.3 "</u>

RAISING:

Rs 885 Ida 14 W	Ore pass	Advance	29.5 feet
	Manway	"	9.0 "
	Timber	"	15.5 "
	Subdrift	"	16.0 "
Rs 400 Ida 14 E	Manway	"	3.5 "

TIMBERING:

St 730 Ida 12 W	Timber sets	Advance	44.0 feet
	Chutes	"	5.0
St 920 Butler 14 W	Chute pockets	"	2.0

MILL OPERATION:

Ball mill grinding time 252.75 hrs., 70.21 per cent efficiency.

CONCENTRATE INVENTORY:

In cars Lot No. 96 approx, 1.65 tons, value \$561 Gross, \$455 Net.

CONCENTRATE SHIPMENTS:

Lot No. 95 May 14 approx. 45.43 tons, value \$12,804 Gross, \$ 11,241 Net

ORE INVENTORIES:

St 100 Ida 12 W	1,220 tons
St 610 Ida 12 W	899 "
St 85 Ida 13 E	2,372 "
St 220 Ida 13 E	1,288 "
St 250 Ida 14 E	718 "
St 375 Butler 13 W	262 "
St 1 Butler 12 W	191 "
St 760 Butler 14 W	1,607 "
In transfers	1,141 "
	<hr/> 9,698 tons, value \$5.41 per ton, \$52,466 Gross.

Tungsten in course bin 24 tons, Value \$128.96 per ton, \$3,095 Gross.

GROSS PAYROLL:

\$9,961.89

OCCUPATIONAL GROUPS:

Underground	36	Admin & Superv	3
Outside	6	Assaying	1
Mill	5	Engineering	1
Tailings pond	1	Office	1
Carbonero	3		<hr/> 6
	<hr/> 51		

Total 57

SILVER BELL MINES CO.

A. A. Smith
A. A. Smith, Gen. Sup't.

SEMI MONTHLY OPERATING REPORT

PERIOD MAY 16-31, 1951

TRAMMED ORE:

	St 1 But	Rs 175 But	St 760 But	St 920 But	Rs 400 Ida	Rs 885 Ida
	14 W Trf	14 W	14 W	14 W	14 E	14 W
Cars	215	76	481	34	19	49
%	15.27	5.40	34.16	2.41	1.35	3.48
Value	\$8.21	3.74	4.94	6.34	293	2.45
	Rs 165 Ida	St 450 Ida	St 670 Ida	St 85 Ida	St 250 Ida	Rs 275 Ida
	14 W	14 W Trf.	14 W Trf.	13 E	14 E	14 W
Cars	133	77	99	15	199	11
%	9.45	5.47	7.03	1.07	14.13	0.78
Value	\$3.54	5.01	4.38	2.92	7.37	-
Total cars:	1,408					
Daily average:	100.57					

WASHING PLANT:

Cars of waste sorted: 250
Per cent of trammed ore: 17.76

TONS MILLED:

Period	To date	Assays	Per ton	Period	To date
		Au 0.057	\$2.00		
		Ag 3.998	3.60		
		Pb 0.616	2.09		
		Cu 0.198	0.97		
1,240	14,226	Gross	\$8.66	\$10,738	\$88,081
		Net	5.88	7,304	59,886

(Current metal quot. N.Y.; Au \$35, Ag 90.16¢, Pb 17¢, Cu 24½¢)

DRIFTING:

Drift Ida 12 W	Advance	19.5 feet
Drift Butler 12 W	"	23.0 "
Drift Butler 12 E	"	15.0 "
Drift Butler 13 W	"	26.0 "
		<u>83.5</u>

STOPPING:

St 610 Ida 12 W	Advance	23.6 fathoms
St 220 Ida 13 E	"	16.3 "
St 1 Butler 12 W	"	30.3 "
		<u>70.2</u>

RAISING:

Rs 885 Ida 14 W	Ore pass	Advance	10.5 feet
	Manway	"	24.5 "
	Timber	"	25.5 "
Rs 400 Ida 14 E	Ore pass	"	16.0 "
	Manway	"	22.0 "
	Timber	"	20.5 "

TIMBERING:

St 730 Ida 12 W	Timber sets	Advance	13.0 Feet
	Chutes	"	2.0
St 90 Butler 13 E	Timber sets	"	30.0 feet
	Chutes	"	3.0

MILL OPERATION:

Ball mill grinding time 202.74 hrs., 52.08 per cent efficiency.

CONCENTRATE INVENTORY:

In cars Lot No. 96 approx. 38.93 tons, value \$10,360 Gross, \$8,144 Net.

CONCENTRATE SHIPMENTS:

No shipments were made during this period.

ORE INVENTORIES:

St 100 Ida 12 W	1,220 tons	\$5.43
St 610 Ida 12 W	1,062	5.47
St 85 Ida 13 E	2,372	4.48
St 220 Ida 13 E	1,453	6.74
St 250 Ida 14 E	642	10.55
St 375 Butler 13 W	262	6.85
St 1 Butler 12 W	595	6.28
St 760 Butler 14 W	1,319	5.47
In transfers	1,356	
	<u>10,281 tons</u>	value \$5.88 pr ton, \$60,452 Gross.

Tungsten in course bin 24 tons, value \$128.96 pr ton, \$3,095 Gross.

GROSS PAYROLL:

\$10,685.01

OCCUPATIONAL GROUPS:

Underground	35	Admin. and superv.	3
Outside	7	Assaying	1
Mill	8	Engineering	1
Tailings Pond	1	Office	1
Carbonero	4		
	<u>55</u>		<u>6</u>

Total 61

SILVER BELL MINES CO.

A. A. Smith
A. A. Smith, Gen. Sup't.

SEMI MONTHLY OPERATING REPORT

PERIOD JUNE 1-15, 1951

TRAMMED ORE:

	St 1 But 14 W Trf	Rs 175 But 14 W	St 760 B ut 14 W	St 920 But 14 W	Rs 400 Ida 14 E
Cars	176	97	329	112	74
Per cent	10.00	5.51	18.69	6.36	4.20
Value	\$3.55	5.00	2.87	3.15	-
	Rs 885 Ida 14 W	Rs 165 Ida 14 W	St 670 Ida 14 W Trf	St 85 Ida 13 E	St 250 Ida 14 W
Cars	51	502	21	242	153
Per cent	3.06	28.52	1.19	13.75	8.69
Value	\$5.14	4.82	1.76	3.27	5.85
Total cars:	1,760				
Daily average:	135.38				

WASHING PLANT:

Cars of waste sorted: 268
Per cent of trammed ore: 15.23

TONS MILLED:

Period	To date	Assays	Per ton	Period	To date
		An 0.031	\$ 1.09		
		Ag 2.572	2.32		
		Pb 0.488	1.66		
		Cu 0.075	0.37		
1,560	15,786	Gross	\$ 5.44	88,486	\$96,567
		Net	3.70	5,772	65,658

(Current metal quot. N.Y.: An \$35, Ag 90.16¢, Pb 17¢, Cu 24½¢)

DRIFTING:

Drift Butler 12 W	Advance	23.0 feet
Drift Butler 13 W	"	22.0 "
		<u>45.0</u>

STOPING:

St 610 Ida 12 W	Advance	26.6 fathoms
St 730 Ida 12 W	"	18.0 "
St 220 Ida 13 E	"	25.3 "
St 1 Butler 12 W	"	14.5 "

COPY

RAISING:

R# 885 Ida 14 W	Ore pass	advance	21.5 feet
	Manway	"	23.0 "
	Timber	"	24.5 "
R# 400 Ida 14 E	Ore pass	"	16.0 "
	Manway	"	14.5 "
	Timber	"	15.5 "
	Subdrift	"	10.0 "

TIMBERING:

St 90 Butler 13 E	Timber sets advance	65.5 feet
	Chutes	7.0

MILL OPERATION:

Ball mill grinding time 253.25 hrs., 70.35 per cent efficiency.

CONCENTRATE INVENTORY:

In cars Lot No. 97 approx. 13.6 tons, value \$5,515 Gross, \$4,393 Net.

CONCENTRATE SHIPMENTS:

Lot No. 96 June 2, approx. 42.27 tons, value \$11,621 Gross, \$9,057 Net.

ORE INVENTORIES:

St 100 Ida 12 W	925 tons	\$ 5.43
St 610 Ida 12 W	1,245	5.47
St 730 Ida 12 W	207	5.47
St 85 Ida 13 E	2,126	4.19
St 220 Ida 13 E	1,796	10.59
St 250 Ida 14 E	647	10.59
St 375 Butler 13 W	413	6.40
St 1 Butler 12 W	649	6.29
St 760 Butler 14 W	1,160	4.92
St 920 Butler 14 W	615	3.82
In transfers	1,222	

11,005 tons \$6.39 per ton, \$70,322 Gross.

Tungsten in course bin 24 tons \$128.96 per ton, \$3,095 Gross.

GROSS PAYROLL:

\$10,445.33

COPY

OCCUPATIONAL GROUPS:

Underground	35
Outside	9
Mill	5
Tailings pond	1
Carbonero	4
	<u>54</u>

Admin. and Superv.	3
Assaying	1
Engineering	1
Office	2
	<u>7</u>

Total 61

SILVER BELL MINES CO.

A. A. Smith
A. A. Smith, Gen. Sup't.

COPY

SEMI MONTHLY OPERATING REPORT

PERIOD JUNE 16 - 30, 1951

TRAMMED ORE:

	St.1 But 14 W Trf.	Rs 175 But 14 W	St.760 But 14 W	St.920 But 14 W	St 280 But 14 W Trf	Rs 400 Ida 14 E
Cars	82	220	240	86	66	46
Percent	4.25	11.40	12.43	4.45	3.42	2.38
Value	\$ 3.56	3.24	3.68	1.88	2.69	3.08
	Rs.885 Ida 14 W	Rs.165 Ida 14 W	St.85 Ida 13 E	St.250 Ida 14 E	Rs 275 Ida 14 W	
Cars	75	667	314	126	9	
Percent	3.88	34.54	16.26	6.53	0.47	
Value	\$ 3.03	3.68	3.80	3.41		

Total Cars : 1,931
Daily Average: 148.54

WASHING PLANT:

Cars of Waste Sorted: 378
Percent of Trammed Ore: 19.58

TONS MILLED:

Period To Date:	Assays	Per Ton	Period to Date :
	Au. 0.026	\$ 0.73	
	Ag. 2.798	2.52	
	Pb. 0.550	1.87	
	Cu. 0.078	0.38	
1732 17,518	Gross	5.50	\$ 9,526
	Net	3.74	\$ 6,478
			\$ 106,093
			72.136

(Current Metal Quot. N.Y.: Au.\$35.00 Ag. 90.16¢ Pb. 17¢ Cu 24½¢)

DRIPTING:

Drift Ida 12 E	Advance	24.5	Feet
Drift Buttler 12 W	"	16.0	"
Drift Butler 13 E	"	24.5	"
Drift Butler 13s W	"	25.5	"
		90/5	"

STOPING :

St 610 Ida 12 W	Advance	38.8	Fathoms
St 730 Ida 12 W	"	17.9	"
St 220 Ida 13 E	"	23.5	Finger Raise
St 1 Butler 12 W	"	18.1	"
		74.8	

COPY

RAISING:

St	Rs 885	Ida 14 W	Ore Pass	Advance	21.0	Feet
			Manway		18.0	"
			Timber		15.0	"
	Rs 400	Ida 14 E	Ore Pass		13.5	"
			Manway		20.0	"
			Timber		24.0	"

TIMBERING :

St	250	Ida 14 E	Drift Sets		13.5	Feet
			Chutes		1.0	
St	220	Ida 13 E	Stull & Lagged		20.0	"
St	920	Butler 13 W	Drift Sets		15.0	"
			Chucks		1.0	
			Chute Pockets		1.0	
St	90	Butler 13 E	Drift Sets	Advance	13.0	"
			Chutes	"	2.0	

MILL OPERATION :

Ball Mill Grinding Time 288.33 Hours 80.09 Percent Efficiency

CONCENTRATE INVENTORY :

In Cars Lot No. 97, Approx. 35.37 tons, Value \$13,712 Gross
\$10,823 Net

CONCENTRATE SHIPMENTS:

No Shipments were made during the period;

ORE INVENTORIES:

St	100	Ida 12 W	600	Tons	\$ 5.06
St	610	Ida 12 W	1,644	"	5.06
St	730	Ida 12 W	292		5.06
St	85	Ida 12 W	1,815		4.17
St	220	Ida 13 E	1,620		9.67
St	250	Ida 13 E	697		9.67
St	375	Butler 13 W	442		2.69
St	1	Butler 12 W	734		6.17
St	760	Butler 14 W	980		4.96
St	920	Butler 14 W	658		3.23
In transfers			1,313		

10,795 Value \$ 5.86 Per ton \$ 63,259 Gross

COPY

TUNGSTEN IN COARSE BIN

24 Tons, \$128.96 , \$ 3,095 Gross

GROSS PAYROLL : 11,921.87

OCCUPATIONAL GROUPS

Underground	36
Outside	9
Mill	6
Carbonero	4
Carbonero	
Road	2
	57

Admin & Superv:	3
Assaying	1
Engineering	1
Office	2
	7
	64

11,005

SILVER BELL MINES CO.

A.A. Smith Gen Supt

COPY

SEMI MONTHLY OPERATING REPORT

PERIOD JULY 1 - 15 , 1951

TRAMMED ORE:

	<u>St.1 Butler</u>	<u>Rs.175 But</u>	<u>St.760 But</u>	<u>St.920 But</u>	<u>St.280</u>	<u>Rs.400 Ida</u>
	<u>14 W Tfr.</u>	<u>14 W</u>	<u>14 W</u>	<u>14 W</u>	<u>But.14 W</u>	<u>14 E</u>
Cars	87	104	190	118	199	207
Percent	4.70	5.61	10.25	6.37	10.74	11.17
Value	\$ 2.63	3.35	4.87	5.24	5.38	1.76
	<u>Rs 885 Ida</u>	<u>Rs 165 Ida</u>	<u>St 85 Ida</u>	<u>St 250 Ida</u>		
	<u>14 W</u>	<u>14 W</u>	<u>13 E</u>	<u>14 E</u>		
Cars	59	245	524	120		
Percent	3.18	13.22	28.28	6.48		
Value	\$ 3.03	2.73	2.78	4.08		

Total Cars: 1,853
Daily Average : 168.45

WASHING PLANT :

Cars Waste Sorted 416
Percent of Trammed Ore : 22.45

TONS MILLED:

<u>Period to Date</u>	<u>Assays</u>	<u>Per Ton</u>	<u>Period to Date</u>
	Au: 0.027	\$0.95	
	Ag: 2.671	2.41	
	Pb: 0.409	1.39	
	Cu: 0.090	0.49	
1,552 19,040	Gross	\$5.19	\$8,055 \$114,148
	Net	3.53	5,479 77,615

(Current Metal quote N.Y. Au:\$35.00, Ag:\$90.16¢, Pb:17¢, Cu:24¢.)

DRIFTING:

Drift Ida 12E	Advance	27.0 Feet
Drift Butler 12 W	"	23.0 "
Drift Butler 13 W	"	22.0 "
Drift Butler 13 E	"	26.0 "
		98.0 Feet

COPY

STOPING:

St. 610 Ida 12 W	Advance	26.0 Fathoms
St. 730 Ida 12 W	"	28.4 "
St. 1 Butler 12 W	"	27.5 "

RAISING:

Rs 400 Ida 14 E	Ore Pass	Advance	15.0 Feet
	Manway	"	16.0 "
	Timber	"	15.0 "
	Subdrift	"	8.5 "

TIMBERING:

St. 920 Butler 13 W	Drift Sets	Advance	47.0 Feet
	Chute Pockets		2.0

MILL OPERATION:

Ball mill grinding Time 242.0 Hrs., 67.22 percent efficiency .

CONCENTRATE INVENTORY :

In cars Lot No. 98 Approx. 19.21 Tons, Value \$6,168 Gross, \$4,922 Net.

CONCENTRATE SHIPMENTS:

Lot No. 97 July 3, Approx. 36.70 tons, Value \$14,293 Gross \$10,977

ORE INVENTORIES:

St. 100 Ida 12 W	572 Tons	\$5.07
St. 610 Ida 12 W	1791	5.07
St. 730 Ida 12 W	550	5.07
St. 85 Ida 13 E	1260	3.84
St. 220 Ida 13 E	1620	9.21
St. 250 Ida 14 E	577	9.21
St. 375 Butler 13 W	271	4.75
St. 1 Butler 12 W	1024	6.15
St. 760 Butler 14 W	938	4.92
St. 920 Butler 14 W	717	3.75
In Transfers	1359	

10,619 \$5.88 Per ton, \$62,440 Gross

TUNGSTEN IN COARSE BIN:

28 Tons - \$128.96 Per Ton , \$3,611 Gross

COPY

GROSS PAYROLL:

10,210.75

OCCUPATIONAL GROUPS:

Underground	32
Outside	10
Mill	6
Carbonero	2
Carbonero Road	3

Administration & Supervision	4
Assaying	1
Engineering	1
Office	2

Silver Bell Mines Company

A.A. Smith , Gen. Supt.

COPY

SEMI MONTHLY OPERATING REPORT.

PERIOD JULY 16-31, 1951

TRAMMED ORE :

	<u>St 1 Butler</u>	<u>Rs 175 But.</u>	<u>St 760 But.</u>	<u>St.920But.</u>	<u>St280 But.</u>	<u>Rs 400 Ida.</u>
	<u>14 W Trf.</u>	<u>14 W</u>	<u>14 W</u>	<u>14 W</u>	<u>14 W Trf.</u>	<u>14 E.</u>
Cars	258	197	276	118	32	46
%	10.69	8.16	11.43	4.89	1.33	1.91
Value	\$6.01	4.91	8.00	4.99	1.75	1.85
	<u>Rs.885 Ida</u>	<u>Rs.165 Ida</u>	<u>St.670 Ida</u>	<u>St.85 Ida</u>	<u>St.250 Ida</u>	
	<u>14 W</u>	<u>14 W</u>	<u>14 W Trf.</u>	<u>13 E</u>	<u>14 E Trf.</u>	
Cars	94	717	137	537	2	
%	3.89	29.70	5.68	22.25	0.08	
Value	\$1.44	4.61	7.36	3.77		
Total Cars:	2,414					
Daily Average:	172.43					

WASHING PLANT:

Cars waste sorted: 577
Percent of trammed ore: 23.90

TONS MILLED:

<u>Period</u>	<u>To Date</u>	<u>Assays</u>	<u>Per Ton</u>	<u>Period</u>	<u>To Date</u>
		Au. 0.034	\$1.19		
		Ag. 2.689	2.42		
		Pb. 0.490	1.67		
		Cu. 0.103	0.51		
1954	20,994	Gross	\$5.79	\$11,314	\$125,462
		Net	\$3.94	\$ 7,694	\$ 85,309

(Current Metal Quot., N.Y.: Au \$35.00 , Ag. 90.16¢, Pb. 17¢, Cu.24½¢)

DRIFTING:

Drift Ida 12 E	Advance	33.5 Feet
Drift Butler 12 W	"	33.0 "
Drift Butler 13 W	"	15.5 "
Drift Butler 13 E	"	14.5 "
		96.5 "

STOPPING:

St. 610 Ida 12 W	Advance	42.3 Fathoms
St. 730 Ida 12 W	"	14.8 "
St. 1 Butler 12 W	"	33.2 "
St. 920 Butler 14 E	"	28.3 "
St. 90 Butler 13 E	"	21.0 "

RAISING:

Rs. 400 Ida 14 E	Ore Pass	Advance	0.0
	Manway	"	4.0
	Timber	"	15.0

TIMBERING:

St. 920 Butler 13 W	Timber Sets	Advance	93.0 Feet
	Chutes	"	1.0 "

MILL OPERATION:

Ball Mill grinding time 350.08 Hrs., 91.17 Percent efficiency.

CONCENTRATE INVENTORY:

In Cars Lot No. 99, 10.65 Tons, Value \$4,091 Gross \$3,072 Net

CONCENTRATE SHIPMENTS:

Lot No. 98 July 25, 38.05 tons, Value \$11,521 Gross \$9,949 Net

ORE INVENTORY:

St. 100 Ida 12 W	44 Tons	\$5.08
St. 610 Ida 12 W	2,204 "	5.08
St. 730 Ida 12 W	532 "	6.45
St. 85 Ida 13 E	653 "	3.92
St. 220 Ida 13 E	1,620 "	9.21
St. 250 Ida 14 E	575 "	9.21
St. 375 Butler 13 W	376 "	4.75
St. 90 Butler 13 E	124 "	6.01
St. 1 Butler 12 E	1,406 "	6.17
St. 760 Butler 14 W	949 "	5.37
St. 920 Butler 14 W	1,109 "	4.24
In Transfers	1,502	

11,094 Tons \$6.11 Per ton, \$67,784 Gross

Tungsten in Coarse Bin 63 Tons \$63.87 Per Ton, \$4,024 Gross

GROSS PAYROLL : 14,400.16

OCCUPATIONAL GROUPS:

Underground	42	Admin. & Suprv.	4
Outside	7	Assaying	1
Mill	7	Engineering	1
Carbonero	2	Office	<u>2</u>
Carbonero Road	3		8
	<u>61</u>		

TOTAL 69

H. H. Smith

Gen. Supt.

SEMI MONTHLY OPERATING REPORT

PERIOD AUGUST 1-16, 1951

TRAMMED ORE:

	<u>st.1 But.</u> <u>14 W.TFR.</u>	<u>Rs.175 But.</u> <u>14 W.</u>	<u>St.760 But.</u> <u>14 W.</u>	<u>St.920 But.</u> <u>14 W.</u>
Cars:	128	116	269	112
Percent:	6.10	5.53	12.82	5.33
Value:	\$7.37	\$1.04	\$3.22	\$1.30

	<u>Rs.165 Ida</u> <u>14 W.</u>	<u>St.670 Ida</u> <u>14 W</u>	<u>St.85 Ida</u>
Cars:	468	677	329
Percent:	22.30	32.25	15.67
Value:	\$1.91	\$7.03	\$4.07

TOTAL CARS: 2,099

DAILY AVERAGE: 161.5

WASHING PLANT:

Cars Waste Sorted 578
Percent of Trammed Ore 27.54

TONS MILLED:

<u>Period</u>	<u>To Date</u>	<u>Assays</u>	<u>Per Ton</u>	<u>Period</u>	<u>To Date</u>
		Au. 0.026	\$0.91		
		Ag. 2.925	2.64		
		Pb. 0.599	2.04		
		Cu. 0.095	0.46		
1,926	22,990	Gross	\$6.05	\$11,652	\$137,114
		Net	\$4.11	\$ 7,915	\$ 93,224

(Current Metal Quot., N.Y.: AU.\$35.00, Ag.90.16¢ , Pb.17.0¢ , Cu.24.24)

DRIPTING:

Drift Ida 12 E	Advance	26.5 Feet
Drift Butler 12 W	"	<u>12.0 "</u>
		38.5 Feet

STOPPING:

St. 730 Ida 12 W.	Advance	40.0 Fathoms
St. 920 Butler 14 W.	"	20.2 "
St. 1 Butler 12 W.	"	22.2 "
St. 610 Ida 12 W.	"	19.7 "

RAISING:

Finger Raise - St. 610 Ida 12 W. Advance 32.0 Feet

TIMBERING:

St. 760 Butler 13 W.	Timber Sets	Advance	53.0 Feet
	Chutes	"	8.0 "

MILLOPERATION:

Ball Mill Grinding Time 317.92 Hrs., 88.31 Percent Efficiency

CONCENTRATE INVENTORY:

In Cars Lot No 100, 4.52 tons, Value \$1725.82 Gross ¹³⁹² ~~\$8120.80~~ Net

ORE INVENTORY

St. 610 Ida 12 W.	2435 Tons	\$5.51
St. 730 Ida 12 W.	806 "	5.51
St. 85 Ida 13 E.	367 "	3.76
St. 220 Ida 13 E.	1620 "	9.21
St. 250 Ida 14 E.	573 "	9.21
St. 375 But 13 W.	376 "	4.75
St. 90 But 13 E.	125 "	6.01
St. 1 But 12 W.	1514 "	5.87
St. 760 But 14 W.	927 "	4.81
St. 920 But 14 W.	1368 "	3.50
In Transfers	1500 "	5.81

11,610 Tons @ \$5.93 Per Ton, \$68,815.65 Gross

Tungsten in Coarse Bin 63 Tons @ \$63.87 Per ton, \$4,024 Gross

GROSS PAYROLL: \$13, 149.38

OCCUPATIONAL GROUPS:

Underground	35	Admin. & Supervision	2
Outside	9	Assaying	1
Mill	7	Engineering	2
Office	2	Carbonero	8

TOTAL: 66

CARBONERO DOZER WORK:

195 Hours
At \$11.00 Per Hour \$2,145.00

A.A. Smith
A.A. Smith
Gen. Supt.

SEMI MONTHLY OPERATING REPORT

OCTOBER 1-15-1951

TRAMMED ORE:

	St. 1 But.	Rse 175 But.	St. 760 But.	St. 920 But.
	14W Tfr.	14W Tfr.	14W Tfr.	14W Tfr.
Cars	288	70	17	128
%	27.77	6.75	1.64	12.34
Value	\$2.88	\$3.50	\$4.52	\$3.76

	St. 250 Ida	Rse. 165 Ida
	14E Tfr.	14W Tfr.
Cars	344	190
%	33.18	18.32
Value	\$2.78	\$4.97

Total Cars 1,037
Daily Aver: 86.4

WASHING PLANT:

Cars waste sorted: 188
% of trammed ore 18.13%

TONS MILLED:

Period	To date	Assays	pr ton	Period	To date
		Au. 0.032	\$1.12		
		Ag. 3.020	2.72		
		Pb. 0.401	1.52		
		Cu. 0.119	0.58		
1,008	29,129	Gross	\$5.94	5,787	\$5,998
		Net	\$4.04		\$172,419
					\$4,072
					\$117,225

(Current Metal Quotations N.Y. Au. \$35.00 Ag. 90.16¢ Pb. 19¢ Cu. 24.2¢)

STOPPING:

St. 730 Ida 12W	Advance	24.5	Pathoms
St. 920 But. 14W	"	19.1	"
St. 90 But. 13W	"	22.1	"
St. 1 But. 12W	"	16.0	"

TIMBERING:

St. 140 Carbonero 800E (Timber Sets) Advance 50.0 Feet
(Chutes) " 5.0 Chutes

MILL OPERATION:

Ball Mill grinding time 176.50 hrs 49.03% efficiency

CONCENTRATE INVENTORY:

None

1

SEMI MONTHLY OPERATING REPORT PERIOD OCTOBER 1-15-51 Continued

CONCENTRATE SHIPMENTS:

Lot #102 shipped Oct. 15th. Approx weight 44.4 tons Value \$12,804 Gross
\$10,163 Net

ORE INVENTORY:

St. 610 Ida 12E	2,463 tons	\$5.51
St. 730 Ida 12W	1,771 "	4.87
St. 220 Ida 13E	1,390 "	9.21
St. 250 Ida 14E	799 "	7.07
St. 375 But. 13W	333 "	4.75
St. 90 But. 13E	974 "	3.92
St. 1 But. 12W	2,269 "	3.59
St. 760 But. 14W	65 "	4.73
St. 920 But. 14W	2,302 "	3.11
In transfers	111 "	
	<u>12,477</u> " @ \$4.99	\$62,212.40 Gross

Tungsten in coarse bin 63 tons @ \$63.87 per ton \$4,024 Gross

PAYROLL FOR PERIOD:

\$12,211.57

Underground	35
Outside	20
Mill	7
Tail Pond	1
Engineer	1
Assayer	1
Office	1
Admin. & Superv	3
	<u>69</u>

SILVER BELL MINES CO.

Gen. Sup't.

SEMI MONTHLY OPERATING REPORT

OCTOBER 16-31-1951

TRAMMED ORE:

	St. 1 But. 14W Tfr.	Rse 175 But. 14W Tfr.	St. 280 But. 14W Tfr.	St. 760 But. 14W Tfr.	St. 920 But 14W
Cars	166	148	83	167	154
%	12.87	11.47	6.43	12.95	11.94
Value	\$5.23	\$3.77	\$4.39	\$4.11	\$2.43

	St. 250 Ida 14E Tfr.	Rse 165 Ida 14W Tfr.
Cars	329	243
%	25.50	18.84
Value	\$2.41	\$5.77

TOTAL CARS 1,290
DAILY AVER: 92.1

WASHING PLANT:

Cars Waste sorted 177
% of trammed ore 13.72%

TONS MILLED:

Period	To Date	Assays	Pr ton	Period	To Date
		Au. 0.043	\$1.50		
		Ag. 2.701	2.44		
		Pb. 0.403	1.53		
		Cu. 0.154	.75		
1,550	30,679	Gross	\$6.22	\$9,641	\$182,060
		Net	\$4.23	\$6,557	\$123,782

(Current Metal Quotations N.Y. Au. \$35.00 Ag. \$90.16 Pb. 19¢ Cu. 24.2¢)

STOPING:

	Advance	32.6 Fathoms
St. 730 Ida 12W	"	12.4 "
St. 920 But. 14W	"	15.3 "
St. 90 But. 13W	"	20.6 "
St. 1 But. 12W		

TIMBERING:

St. 140 Carbonero 800E (Timber Sets)	Advance	21.0 Feet
(Chutes)	"	2.0 Chutes
St. 440 Carbonero 800E (Timber Sets)	Advance	46.0 Feet
(Chutes)	"	5.0 Chutes

SEMI MONTHLY OPERATING REPORT FOR PERIOD OCTOBER 16-31-1951 (Continued)

MILL OPERATION:

Ball Mill grinding time 252.75 Hrs 65.82% efficiency

CONCENTRATE INVENTORY:

Lot #103 27.62 tons Approx. Value \$6,723 Net

CONCENTRATE SHIPMENTS:

No shipments during period

ORE INVENTORIES:

St. 610 Ida 12W	2,463 Tons	\$5.51
St. 730 Ida 12W	2,144 "	5.03
St. 220 Ida 13E	1,300 "	9.21
St. 250 Ida	799 "	7.07
St. 375 But. 13W	245 "	4.75
St. 90 But. 13E	1,141 "	4.05
St. 1 But. 12W	2,410 "	3.59
St. 760 But. 14W	53 "	4.73
St. 920 But. 14W	2,416 "	3.02
In Transfers	145 "	
	<u>13,116</u> "	@ \$4.93 \$64,661.88 Gross

Tungsten in coarse bin 63 tons @ \$63.87 per ton \$4,024 Gross

PAYROLL FOR PERIOD:

\$10,645.11

Underground	33
Outside	17
Mill	6
Assaying	1
Engineering	1
Office	1
Tail Pond	1
Admin & Superv.	3
	<u>63</u>

SILVER BELL MINES CO

Gen. Sup't

SEMI-MONTHLY OPERATING REPORT

NOVEMBER 1-15, 1951

TRAMMED ORE

	<u>1 St. (Trf)</u>	<u>175 R. (Trf)</u>	<u>760 St. (Trf)</u>	<u>920 St.</u>	<u>280 St. (Trf)</u>
	<u>But. 1 1/4 W</u>	<u>But. 1 1/4 W</u>	<u>But. 1 1/4 W</u>	<u>But. 1 1/4 W</u>	<u>But. 1 1/4 W</u>
Cars	320	80	215	103	71
%	24.45	6.11	16.43	7.87	5.42
Value	\$2.45	\$4.00	\$4.19	\$3.02	\$3.70

	<u>250 St. (Trf)</u>	<u>165 R. (Trf)</u>	<u>450 St. (Trf)</u>
	<u>Ida 1 1/4 E</u>	<u>Ida 1 1/4 W</u>	<u>Ida 1 1/4 W</u>
Cars	150	249	121
%	11.46	19.02	9.24
Value	\$2.72	\$4.64	\$1.55

Total cars trammed: 1309
Daily average 100.69

WASHING PLANT

Cars of waste rock sorted: 170
Percent of trammed ore : 12.98

TONS MILLED

Period To Date

1,562 32,241

ASSAYS PER TON

Period To Date

Au. 0.040 \$1.40
Ag. 2.977 2.68
Pb. 0.483 1.83
Cu. 0.138 0.66

Gross \$6.57 \$10,262 \$192,322
Net \$4.59 \$ 7,170 \$130,952

(Current Metal Quotations NY: Au \$35.00, Ag \$0.9016, PB \$0.19, Cu \$0.242)

STOPING

1 Stope Butler 12 W	Advance	19.1	Fathoms
90 Stope Butler 13 E	"	30.4	"
920 Stope Butler 14 W	"	26.9	"
730 Stope Ida 12 W	"	25.8	"

TIMBERING

440 Stope Carbonero 8 E	Sets Advance	79.0	Ft.
	Chutes	11	

Semi-Monthly Operating Report
November 1-15, 1951

MILL OPERATION

Ball Mill Grinding Time: 279.25 Hours.
77.60 % of total possible grinding time.

CONCENTRATE INVENTORY

Lot 104* 9.49 Tons Net Value estimated at \$3,464.00
Gross " " " \$3,669.40

*Redesignated as Truck Lot No. 1

CONCENTRATE SHIPMENTS

Lot 103 44.0 Dry Tons Shipped by rail on November 9, 1951.
Gross Value \$13,074.16
Net Value \$10,397.20

ORE INVENTORY

1 Stope Butler 12 W	2626 Tons @ \$3.62
90 Stope Butler 13 E	1525 3.79
375 Stope Butler 13 W	109 4.75
760 Stope Butler 14 W	53 4.73
920 Stope Butler 14 W	2845 3.03
220 Stope Ida 13 E	1300 9.21
250 Stope Ida 14 E	973 6.29
610 Stope Ida 12 W	2463 5.51
730 Stope Ida 12 W	2393 4.49
In transfer	126 4.65

14413 Tons Total -- \$67,020.45 Gross Value

Tungsten ore (in coarse ore bin) 63 Tons @ \$6387 \$4023.81 Gross Value

PAYROLL FOR PERIOD

\$11,088.49

Underground	33
Surface	19
Mill	6
Tailing Pond	1
Assaying	1
Engineering	2
Office	1
Adm & Super	3
	<u>66</u>

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

SEMI-MONTHLY OPERATING REPORTNOVEMBER 16-30, 1951TRAMMED ORE

	St 1 Trf	Rs 175 Trf	St 760 Trf	St 280 Trf	St 920
	But 14 W	But 14 W	But 14 W	But 14	But 14 W
Cars	57	79	155	268	402
Per Cent	4.71%	6.53%	12.82%	22.17%	33.26%
Value	\$4.91	\$2.71	\$9.17	\$3.56	\$2.80

	St 250 Trf	Rs 165 Trf	St 450
	Ida 14 E	Ida 14 W	Ida 14 W
Cars	93	91	64
Per Cent	7.69%	7.53%	5.29%
Value	\$1.67	\$3.35	\$1.55

Total Cars Trammed: 1209

Daily Average 93.0

WASHING PLANT

Cars of Waste Sorted: 174
Per Cent of Trammed Ore; 14.39%

TONS MILLED

Period	To Date	Assays	Per Ton	Period	To Date
		Au 0.045	\$ 1.58		
		Ag 1.958	1.77		
		Pb 0.310	1.18		
		Cu 0.144	.70		
1,207	33,448	Gross	\$ 5.23	\$ 6,313	\$ 198,635
		Net	\$ 3.56	\$ 4,297	\$ 135,249

(Current Metal Quotations N.Y., Au \$35.00; Ag 90.16¢; Pb 19¢; Cu 24.2¢)

STOPING

St 730 Ida 12 W	Advance	7.8 fathoms
St 90 But 13 E	"	10.6 "
St 750 But 13 W	"	14.9 "
St 865 But 13 W	"	4.6 "
St 1 But 12 W	"	7.1 "
St 140 Carb 8E	"	1.7 "

TIMBERING

Drift Carbonero 8 W	(Timber Sets)	Advance	60.5 ft
Shoofly Tunnel	(Drift Sets)	"	14.5 ft

MILL OPERATION

Ball mill Grinding time 270.25 hr.; 75.07% Efficiency

COPY

CONCENTRATE INVENTORY

Truck Lot No. 3 --2.52 dry tons----Gross Value \$1,304
Net Value \$1,157

CONCENTRATE SHIPMENTS

Truck Lot No. 1 --Shipped Nov. 21, 1951--10.01 dry tons
Gross Value \$4,071
Net Value \$3,423

Truck Lot No. 2 --Shipped Nov. 27, 1951--7.56 dry tons
Gross Value \$3,075
Net Value \$2,586

ORE INVENTORY

St 610 Ida 12 W	2463	tons @	3.62
St 730 Ida 12 W	2442		4.45
St 220 Ida 13 E	1049		9.21
St 250 Ida 14 E	1131		5.89
St 90 But 13 E	1641		3.82
St 1 But 12 W	2698		3.58
St 760 But 14 W	53		4.73
St 920 But 14 W	2443		2.72
St 750 But 13 W	303		6.27
St 865 But 13 W	68		6.27
In Transfers	55		4.29
14,346 tons @ \$4.29		Gross Value \$	61,491

Tungsten ore (in coarse bin) 63 tons @ \$63.87; \$ 4,024 Gross

PAYROLL FOR PERIOD

	Gross
Underground	34
Surface	17
Mill	6
Tailing Pond	3
Assaying	1
Engineering	2
Office	1
Adm & Super	3
	<u>67</u>

SILVER BELL MINES COMPANY

General Superintendent

COPY

SEMI-MONTHLY OPERATING REPORT DECEMBER 1-15, 1952

TRAMMED ORE

	St 1 Trf But 14 W	Rs 175 Trf But 14 W	St 760 Trf But 14 W	St 280 Trf But 14 W	St 920 But 14 W
Cars	171	128	222	24	711
Per Cent	11.97%	8.96%	15.55%	1.68%	49.80%
Value	\$7.32	\$3.65	\$11.16	\$5.45	\$4.31
	Rs 165 Trf Ida 14 W	St 450 Ida 14 W	Carbonero Ore		
Cars	56	5	111		
Per Cent	3.92%	0.35%	7.77%		
Value	\$7.13	\$1.55	\$11.39		

Total Cars Trammed: 1428
Daily Average: 109.8

WASHING PLANT

Cars of waste sorted: 139 Cars
Per cent of trammed ore: 9.73%

TONS MILLED

Period	To date	Assays	Per Ton	Period	To Date
		Au 0.057	\$ 2.00		
		Ag 2.194	1.97		
		Pb 8.376	1.43		
		Cu 0.129	.62		
1,177	34.625	Gross	\$ 6.02	\$ 7,086	\$205,721
		Net	\$ 4.09	\$ 4,814	\$140,063

(Current Metal Quotations N.Y.: Au \$35.00; Ag 90¢; Pb 19¢; Cu 24.075¢)

STOPING

St 730 Ida 12 W	Advance	31.2	fathoms
St 1 But 12 W	"	11.0	"
St 90 But 13 E	"	29.5	"
St 750 But 13 W	"	19.8	"
St 865 But 13 W	"	24.9	"
St 140 Carb 8 E	"	1.3	"

TIMBERING

Shoefly Tunnel (drift sets) Advance 15.0 ft.

DRIFTING

Drift Carb 8 E	Advance	14.5 ft.
X-Out Ida 900 W	"	3.0 ft.

COPY

MILL OPERATION

Ball mill grinding time 274.0 hr., 76.11 % Efficiency

CONCENTRATE INVENTORY

Truck Lot No 4 -- 6.40 dry -- Gross Value \$ 3,505
tons Net Value \$ 2,918

CONCENTRATE SHIPMENTS

Truck Lot No 3 -- 8.45 dry tons -- Shipped Dec. 10, 1951
Gross Value \$4,226
Net Value \$3,585

ORE INVENTORY

St 610 Ida 12 W	2463 tons	@ \$3.62
St 730 Ida 12 W	2734	4.74
St 220 Ida 13 E	1049	9.21
St 250 Ida 14 E	1131	5.89
St 90 But 13 E	2042	4.10
St 1 But 12 W	2786	3.58
St 760 But 14 W	137	8.67
St 920 But 14 W	1778	3.38
St 750 But 13 W	515	8.79
St 865 But 13 W	249	8.79
In transfers	217	4.73
	15,101 tons @ \$4.33	
	Gross Value \$ 71,570	

Tungsten ore (in coarse bin) 63 tons @ \$ 63.87; Gross Value \$ 4,024

PAYROLL FOR PERIOD

Gross Payroll \$11,931.14

Underground	37
Surface	20
Mill	7
Tailing Pond	1
Assaying	1
Engineering	1
Office	2
Adm & Super.	3
	<hr/> 72

SILVER BELL MINES COMPANY

A. A. Smith
A. A. Smith, General Superintendent

COPY

SEMI-MONTHLY OPERATING REPORT DECEMBER 16-31, 1951

TRAMMED ORE:

	St 1 Trf But 14 W	Rs 175 Trf But 14 W	St 760 Trf But 14 W	St 920 But 14 W	Rs 165 Trf Ida 14 W	Carbonere Ore
Cars	136	48	228	388	225	135
Per Cent	11.7%	4.2%	19.7%	33.4%	19.4%	11.6%
Value	\$3.68	\$4.70	\$8.99	\$4.06	\$6.74	\$16.72

Total Cars Trammed: 1160 Cars
Daily Average: 96.7 Cars

WASHING PLANT:

Cars of waste sorted: 163 cars
Per cent of trammed ore: 14.1%

TONS MILLED:

Period	To Date	Assays	Per Ton	Period	To Date
		Au 0.073	\$ 2.56		
		Ag 2.796	2.52		
		Pb 0.694	2.64		
		Cu 0.187	0.92		
1,004	35,629	Gross	\$ 8.64	\$8,675	\$214,396
	35,589	Net	\$ 5.88	\$5,904	\$145,967

(Current Metal Quotations N. Y.; Au \$35.00; Ag 90¢; Pb 19¢; Cu 24.5¢)

STOPING:

	Advance	
St 730 Ida 12 W	6.3 Fathoms	
St 90 But 13 E	21.9 "	
St 750 But 13 W	18.3 "	
St 865 But 13 W	16.8 "	

DRIFTING:

	Advance	
Drift Carb 8 E	24.5 Feet	

RAISING:

	Advance	
Rs 1150 But 13 W	21.0 Feet	
St 730 Ida 12 W (raise)	33.5 "	

MILL OPERATION:

Ball Mill Grinding Time 236.50 Hr.; 61.6% Efficiency

CONCENTRATE INVENTORY:

Truck Lot No. 6--7.61 Dry Tons--Gross Value	\$ 3,711
Net Value	\$ 2,918

CONCENTRATE SHIPMENTS:

Truck Lot No 4.--8.50 Dry Tons--Shipped Dec 18, 1951
 Gross Value \$4,674
 Net Value \$4,132

Truck Lot No. 5.--8.24 Dry tons--Shipped Dec. 26, 1951
 Gross Value \$3,751
 Net Value \$3,140

ORE INVENTORY:

St 610 Ida 12 W	2463 tons	@ \$ 3.62
St 730 Ida 12 W	2845	4.82
St 220 Ida 13 E	1049	9.21
St 250 Ida 14 E	1131	5.89
St 1 But 12 W	2786	3.58
St 90 But 13 E	2300	4.08
St 760 But 14 W	80	8.67
St 920 But 14 W	1428	3.38
St 750 But 13 W	723	8.86
St 865 But 13 W	415	8.86
In Transfers	10	4.86
Carbonate Stopes	5645	8.36
	20,875 tons @ \$5.80	
	Gross Value \$121,153	

TUNGSTEN ORE:

Coarse Ore Bin	63 tons	@ \$ 63.87
Ra 400 Ida 14 E	156 tons	@ \$ 31.85
Sacked ore (6-level)	1 tons	@ \$325.00
	Gross Value \$9,318	

PAYROLL FOR PERIOD:

Underground	38	Gross Payroll for period
Surface	22	
Mill	7	\$9,449.13
Tailing pond	1	
Assaying	1	
Engineering	2	
Offices	1	
Adm. & Supervision	3	
	75	

SILVER BELL MINES CO.

H. H. Smith
 General Superintendent

(File)

SEMI-MONTHLY REPORT ON PROGRESS FOR PERIOD NOVEMBER 1-15, 1951

EXPLORATION AND DEVELOPMENT

Silver Bell Mine

Ida Vein Development halted Sept. 1, 1951

6-Level Ida Progress to date

Track relaid from portal to tungsten stope
Gage changed from 24 in to 18 in.
All caves on track cleaned up
Air line installed from Ida Raise to tungsten stope
& to 600 level
Air tugger hoist installed in tungsten stope raise
Stoper, steel, & jack tank brought to stope
New ladders & slide installed in tungsten stope raise

Butler Vein Development halted Sept. 1, 1951

St 750 But 13 W -- Timbered but not ready for contract
St 865 But 13 W -- Timbered but not ready for contract
St 920 But 13 W -- Timbered but not ready for contract

Carbonero Mine

Carbonero Vein

Drift 8 E

Recovered drift to the face approximately 630 ft
Sampling completed except for portion from
400 ft to 420 ft inclusive. Sampling of this
portion omitted because of difficulty in
handling water flow.

Drift 8 W

Recovered drift 110 ft
Sampling carried to 70 ft west
Sampling will be continued when conditions permit

Stope 140-8-E

71.0 ft long
Timbering completed

Stope 440-8-E

164.5 ft long
Timbering completed

(Stopes are designated by the distance in feet along the
vein from the Shoofly tunnel to the beginning of the
stope)

Example

Stope 140-8-E

Direction from
Shoofly tunnel
Distance from
Mine level
Shoofly tunnel

EXPLORATION AND DEVELOPMENT (cont)

Carbonero Mine

Panama Vein No progress

North Star Vein No progress except in Shoofly tunnel portion

Shoofly tunnel Air line completed to Carbonero Vein
2160 ft of 4 in pipe
1000 ft of track relaid with 20-lb rail
about 200 ft of the portal retimbered

CONSTRUCTION WORK

Silver Bell Mine

Built steel-covered, wood-frame building over outside
ore raise

Tungsten Mill

15 ft x 23 ft concrete floor poared
Machinery footings poared (no piers above the floor yet)
4 x 3 ball mill and rake classifier at plant site
but not erected

Carbonero Mine

Road to mine -----approximately 2.5 miles
Power line -----approximately 3.7 miles
Timber shed -----18 ft x 80 ft with a 12 ft x 3 ft office
Ore bin -----100 ton capacity @21 cu ft per ton
Snow shed -----from timber shed to ore bin
Battery charging station
Dry room -----11 ft x 15 ft
Compressor house--new steel roof & sides
new concrete floor
Compressors -----1 Ingersoll Rand Imperial Model 10 rebuilt
1 Gardner-Denver type WBH being assembled

Ophir Townsite

School house

Redecorated, wired for electricity,
fluorescent fixtures installed,
water, lavatory wash basin, cess-pool,
and full width concrete porch built.

House No. 1

New roof, floor, and walboard

House No. 2

New roof, floor, wallboard, bathroom &
kitchen plumbing, wiring, water, and septic tank

House No. 3

New roof, wallboard, and new floor in one room
(two family dwelling)

Cabin No. 4

New roof, wallboard, and cold water

Ophir water supply

rebuilt penstock

ENGINEERING

2 stations set in Shoofly portal
Azimuth determined from a sun shot
Calculated claim acreage held by the Silver Bell Mines Co.
and by Sanders to be 1,450 acres. Some of the property
acquired from J. Noyes is not included
Office building floor plan drawn up
Structural analysis made of the bridge behind the mill
J. G. Claim surveyed and staked
discovery work about 1/2 completed

The material presented in this report represents recent
work that has been done and not merely the progress made
during the past 2 weeks. In the future only that progress
made during the 2 week period will be reported.

A. A. Smith

General Superintendent

(file)

SEMI-MONTHLY PROGRESS REPORT FOR PERIOD NOVEMBER 16-30, 1951

EXPLORATION AND DEVELOPMENT

Silver Bell Mine

Ida Vein

Cross-cut started on 900 level from the top of the 115-10-Ida Stope. Bearing of cross-cut S30°W. Advance 15.0 ft. This cross-cut is being driven to find the south split of the Ida Vein at this level.

Carbonero Mine

Carbonero Vein

Drift 8 E
Airline to east face installed

Drift 8 W
Recovered drift for 130 ft. west of the Shoofly tunnel. Back retimbered for 60.5 ft. Bottom of Carbonero shaft in sight but inaccessible because of water.

Panama Vein

Drift 8 W
Recovered drift for 235 ft. from Shoofly tunnel.

Shoofly Tunnel

Drift sets at portal advanced 14.5 ft. Relaying rail advanced to within 250 ft. of Panama vein.

CONSTRUCTION WORK

Silver Bell Mine

Electric heaters have been installed in the mine dry room

Silver Bell Mill

Obtained a used 35 hp horizontal boiler with brick and steam pump at Austin, Colorado. Installation of boiler in mill has been started.

Carbonero Mine

Framework completed for steel-covered building over ore bin.

Ophir Townsite

House No. 1 wired for electricity

House No. 5 New roof

Two carpenters and 2 helpers are working on rebuilding houses.

ENGINEERING

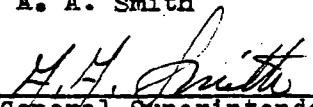
Office

Ophir Loop Plat completed
Old Ophir Plat partially completed
J.G. Claim location filed at the Courthouse
Semi-monthly reports

CHRONOLOGY

- Nov. 17 Carbonero road plowed out. Mine was snowed in for 4 days. Stope 920 Butler 14 W Completed.
- Nov. 20 First truck shipment of concentrates made to Leadville, Colorado. Received a 1000 gal. gasoline tank.
- Nov. 21 Obtained a 35 hp boiler at Austin, Colorado
Hole broke out in tailings dam, 15-ft wide and 50-ft long. Mill shut down 28 hr while emergency repairs to pond were made.
- Nov. 26 St 750 Butler 13 W put on contract
- Nov. 27 Second concentrate lot shipped by truck to Leadville
- Nov. 28 St 865 Butler 13 W put on contract
St 140 Carbonero 8 E put on contract
- Nov. 30 Gasoline tank and pump installed
Tractor operator to contract snow removal on Carbonero road arrived with caterpillar tractor.

A. A. Smith


General Superintendent

(-11e)

SEMI-MONTHLY PROGRESS REPORT FOR PERIOD DECEMBER 1-15, 1951

EXPLORATION AND DEVELOPMENT

Silver Bell Mine

Ida Vein

Cross cut on 900 level west advanced 3.0 ft. or a total of 18.0 ft.
The sill of this cross cut is ~~21.0~~ 21.0 ft above the 10-level track.

Butler Vein

Raise 1150-13-W back at 40.5 ft.
Adjoining ore pass back at 50.0 ft.
The ore pass will be dropped because the ground is so weak that the pillar between the raise and the ore pass caves out completely.

Carbonero Mine

Carbonero Vein

Drift 8 E--advanced 14.5 ft. Face shows 2 sulfide veins about 6 in. wide each and separated by 24 in. of waste. Another sulfide vein about 1 in. wide is also showing in the face.

Drift 8 W--Recovered drift for 190 ft. west of the Shoofly tunnel. The west breast is accessible at 425 ft. west of the Shoofly tunnel.

Panama Vein

Drift 8 W--Recovered drift for 275 ft. west of the Shoofly tunnel. The third raise west of the Shoofly tunnel is open to the next level approximately 100 ft. above 8-level. 100 ft. of drift on the level is open.

Shoofly Tunnel

Drift sets at portal advanced 15.0 ft.

CONSTRUCTION WORK

Silver Bell Mill

Brick work around boiler about half completed.

Tailings Pond

A new tailing launder has been built around the south side of the pond. This launder is about 6 ft. higher than the previous launder.

COPY

CONSTRUCTION WORK (cont)

Carbonero Mine

The outside ore bin has been completed.

Ophir Townsite

Two carpenters are at work on rebuilding old houses.

ENGINEERING

Carbonero Mine

Made a brunton survey of the 75 raise Carb 8 W and the 8 sublevel

Office

Made out U. S. Bureau of Mines accident reports for first 11 months of 1951.

Made a map of the brunton survey of 8-sublevel of the Carbonero Vein.

Semi-Monthly Reports.

CHRONOLOGY

Dec. 3 Drift Carb 8 E started

Dec. 4 60 tons of Carbonero ore milled

Dec. 5 Snow drifted to 5 or 6 ft deep.

Dec. 6 Carbonero Mine snowed in

Dec. 10 Third concentrate lot trucked to Leadville

Dec. 11 Ball Mill Liners inspected

Dec. 12 Bureau of Mines Engineers examined the Carbonero Mine


A.A. SMITH, General Superintendent

COPY

SEMI-MONTHLY PROGRESS REPORT FOR PERIOD DECEMBER 16-31, 1951

EXPLORATION & DEVELOPMENT:

Silver Bell Mine

Butler vein-- Raise 1150-13-W Back at 61.5 ft.

Carbonate Mine

Drift 8-E advanced 24.5 ft. Total advance to date 39.0 ft.

Shoofly Tunnel--Drift sets at portal advanced 5.0 ft.
Back barred down and cleaned up for
and additional 90 ft.

CONSTRUCTION WORK:

Silver Bell Mill

Brick work on boiler completed.

ENGINEERING:

Office -- all time devoted to bookkeeping.

CHRONOLOGY:

Dec 18 Concentrate Lot No 4 trucked to Leadville
Dec 26 Concentrate Lot No 5 trucked to Leadville
Dec 31 Mine & Mill snowed in -- Power off all day
Storm blew 10 tailings-laundry-towers down
7 ft of snow in front of office

SILVER BELL MINES CO.

General Superintendent

Feb. 1, 1952

ORE MINED 1951

Tons milled = 35,589
Gross assay value \$214,406

Cars trammed:	Silver Bell	=	38,758
	Carbonero	=	246
	Total	=	39,004
	Waste sorted	=	7,192
	Cars to mill	=	31,812

Ratio: 35,589/31,812 = 1.1187 tons per car

This gives:

Tons mined:	Silver Bell	=	43,359
	Carbonero	=	275
	Total	=	43,634
	Waste sorted	=	8,045 (18.4%)
	To mill	=	35,589

GROSS ASSAY VALUES

43,634 tons crude ore, gross assay value	\$214,406	=	\$4.91/ton
<u>8,045 tons waste sorted</u>	<u>0</u>		
35,589 tons sent to mill	214,406	=	\$6.02/ton
Grade raised			\$1.11/ton

(FILE)

OPERATING REPORT, DECEMBER, 1952

ORE MINED:

PRODUCTION:

St 600 Carb 8 E

Ore
64
64 tons

Waste

Advance
4.6 fathoms

DEVELOPMENT:

Drifts:

Drift, Carb 8 E

166
166 tons

33.6 ft.

Backstopes:

St 850, Ida 14 W

445

25.0 fathoms

St 300, Ida 13 W

38

12.8 fathoms

St 310, Ida 12 W

257

14.3 fathoms

St 1100, But 14 W

**** (Inaccessible)
740 tons

Total ore mined

970 tons

ORE INVENTORY:

	Tons	Value per ton
St 610, Ida 12 W	503	\$ 5.846
St 400, Ida 13 E	1176	6.927
St 300, Ida 13 W	197	5.009
St 310, Ida 12 W	257	5.009
St 1, But 11 W	474	5.020
St 1, But 12 W	411	4.566
St 940, But 12 W	224	7.890
St 990, But 13 W	1484	6.920
St 1100, But 14 W	**** (Inaccessible) ****	
St 140, Carb 8 E	235	7.362
St 600, Carb 8 E	1757	45.286
Old Carb. stopes	10006	12.063
Carb. dump	25507	5.202
	42231 tons	
@ \$8.627 per ton		Gross value
		\$364,340

TUNGSTEN ORE INVENTORY:

	Tons	Value per ton
Coarse ore bin	30	\$65.00
Rs 400, Ida 14 E	112	32.50
Rs 165, Ida 10, 11, 12, 13 W	180	37.70
Sacked ore	0.5	325.00
Broken ore in 6-level stopes	25	32.50
	347.5 tons	
	Gross value	\$13,351
Tungsten concentrates:	600 lbs. @ 62.6% WO ₃	
	Gross value	\$1221

ORE TRAMMED: CAR FACTOR: 1.1038697 tons per car ASSAY FACTOR: 80.87156%

	Ra 165 Trf Ida 14 W	Ra 175 Trf Put 14 W	St 250 Trf Ida 14 E	St 850 Ida 14 W
Tons	307	302	462	445
Per Cent	11.358%	11.174%	17.091%	16.463%
Value	\$3.588	\$7.497	\$3.598	\$5.631
	St 1 Trf Put 14 W	St 865 Trf Put 14 W	St 990 Trf Put 13 W	Carbonero Ore
Tons	49	29	815	294
Per Cent	1.813%	1.073%	30.151%	10.877%
Value	\$5.235	\$7.267	\$5.628	\$11.542

Total ore trammed: 2703 tons
104.0 tons per day

WASHING PLANT:

Tons of waste sorted: 535 tons
Per Cent of trammed ore: 19.80%

ORE MILLED:

	Tonnage		Assay Values			
	Period	To Date	Period		To Date	
			Gross	Net	Gross	Net
Bell	1932	26040	\$12342	\$8393	\$190,241	\$122,562
Carb	236	5756	3721	2530	119,733	81,419
Totals	2168	31796	\$16063	\$10922	\$299,974	\$203,981

Metals:

	Assays:		Carbonero		Combined	
	Silver Bell		Assay	Value	Assay	Value
Au \$35.00	0.031	\$1.085	0.013	\$0.447	0.029	\$1.015
Ag 0.90	3.368	3.031	3.570	3.213	3.390	3.051
Pb 0.1475	0.521	1.537	3.718	10.967	0.869	2.564
Cu 0.245	0.150	0.739	0.233	1.140	0.153	0.779
Gross		\$6.388		\$15.767		\$7.409
Net (68%)		\$4.344		10.722		5.038

MILL OPERATION:

Ball mill grinding time: 437.25 hours
Efficiency 58.770%

CONCENTRATES:

Shipments:

Truck Lot No. 65	9.6655 dry tons	Gross Value	\$1980.00
Shipped Dec 2, 1952		Net Value	\$1431.63
Truck Lot No. 66	12.150 dry tons	Gross Value	\$2966.00
Shipped Dec. 5, 1952		Net Value	\$2335.75
Truck Lot No. 67	9.918 dry tons	Gross Value	\$2790.00
Shipped Dec. 14, 1952		Net Value	\$2290.93
Truck Lot No. 68	11.665 dry tons	Gross Value	\$2981.00
Shipped Dec. 17, 1952		Net Value	\$2429.80
Truck Lot No. 69	14.71 dry tons	Gross Value	\$3771.00
Shipped Dec. 26, 1952		Net Value	\$3095.72
(Estimated on mine assay and weights)			

Inventory:

Truck Lot No. 70	4.06 dry tons	Gross Value	\$1040.00
		Net Value	\$ 854.52

Total Concentrates Produced:

Shipments	58.1085 tons	\$14,388.00	\$11,583.73
Plus Dec. 31, Inv.	4.06 tons	1,040.00	854.52
	62.1685 tons	\$15,428.00	\$12,438.25
Less Nov. 30, Inv.	10.50 tons	\$ 2,356.00	\$ 1,732.50
	51.6685 tons	\$13,072.00	\$10,705.75

PAYROLL FOR PERIOD

	Hell	Carbonero	Total
Underground	25	2	27
Surface	5	1	6
Mill	10		10
Tailings Pond	2		2
Omair Corp.			7
Assaying			1
Engineering			2
Office			1
Supervision	3	1	4
Totals	45	4	60

Gross Payroll for December, 1952 \$22,352.49

H. A. Smith
 H. A. Smith
 General Manager

(File)

OPERATING REPORT: NOVEMBER, 1952

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 400, Ida 13E	502**		No contract
St 600, Carb 8E	569		40.6 fathoms

Carb dump
* Tonnage mined during the period 16 October to
30 November, 1952

DEVELOPMENT:

Drifts:

Drift, Ida 9 W	53**	No contract
Drift, Carb 8 E	90	24.8 ft.
	143 tons	

Back stopes:

Stope 850, Ida 14W	398
Stope 300, Ida 13W	159
Stope 1, But 11W	517**
Stope 940, But 12W	407***
Stope 800, Carb 8E	180
Stope 900, Carb 8E	165
	1826 tons

Total ore mined ~~3040~~ tons
3122

** Tungsten ore to Raise 165, Ida 13--10W

*** 474 tons previously mined but not reported

**** 353 tons previously mined but not reported

ORE INVENTORY:

	Tons	Value per ton
St 610, Ida 12W	810	\$ 5.86
St 400, Ida 13E	1638	6.87
St 300, Ida 13W	159	4.75
St 1, But 11W	474	4.95
St 1, But 12W	762	4.52
St 940, But 12W	253	7.30
St 990, But 13W	2299	6.86
St 140, Carb 8E	272	7.21
St 600, Carb 8E	1784	44.73
Old Carbonero stopes	10005	11.84
Carbonero dump	25507*	5.06
Gross	43964	1985.459

* Tonnage recalculated 1 December 1952 corrected
for shorly tunnel mine waste

TUNGSTEN ORE INVENTORY:

	Tons	Value per ton
Coarse ore bin	30	\$ 65.00
Rs 400, Ida 14E	112	32.50
Rs 165, Ida 10, 11, 12, & 13 W	243	37.70
Sacked ore	0.5	325.00
Broken ore in 6 level stopes	25	32.50
	410.5 tons	
Gross value	\$15,727.00	

Tungsten concentrates: 300 lbs @ 42.6% WO₃
Gross value \$ 415.00

	Gross	Net.
Nov. Shipments.	\$ 22,979	\$ 15,924.76
plus Nov 30 Inv	2,356	1,732.50
	<hr/> 25,335	<hr/> 17,657.26
Less Oct 30 Inv	4,152	3,508.86
	2,977	810.05
November Production	<hr/> \$ 18,233	<hr/> \$ 13,338.35

FILE

ORE TRAMMED: CAR FACTOR: 1.1142583 tons/car

ASSAY FACTOR:
96.6466%

	Rs 165 Trf Ida 14W	St 250 Trf Ida 14R	St 350 Ida 14W	Rs 175 Trf But 14W
Tons	273	146	398	435
Percent	9.66	5.17	14.09	15.40
Value	\$4.531	\$4.367	\$3.471	\$8.093
	St 1 Trf But 14 W	St 365 Trf But 14W	St 990 Trf But 13W	Carbonero Ore
Tons	257	154	261	901
Percent	9.10	5.45	9.24	31.89
Value	\$4.798	\$7.012	\$5.388	\$14.168

Total ore trammed : 2825 tons
113 tons per day

WASHING PLANT:

Tons of waste sorted: 504 tons
Percent of trammed ore 17.84%

ORE MILLED:

	<u>Tonnage</u>		<u>Assay Values</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Sell	1581	24,108	\$10,904	\$7,415	\$167,899	\$114,170
Carb	740	5,520	\$12,369	\$8,411	\$116,012	\$78,889
Total	2321	29,628	\$23,273	\$15,826	\$283,911	\$193,059

Metals	Assays		Carbonero		Combined		
	<u>Silver</u>	<u>Sell</u>					
	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>value</u>	
Au	35.00	0.025	\$0.875	0.022	\$0.770	0.024	\$0.840
Ag	0.90	3.538	3.184	2.737	2.463	3.283	2.955
Pb	0.14	0.530	1.434	3.740	10.742	1.553	4.348
Zn	0.125	0.163	0.408	0.870	2.175	0.389	0.973
Cu	0.245	0.193	0.846	0.171	0.838	0.186	0.911
Gross			\$5.827		\$16.715		\$10.027
Net (68%)			4.690		11.366		6.818

MILL OPERATION:

Ball mill grinding time: 473.25 hours
Efficiency 65.73 %

CONCENTRATES:

Shipments:

Truck Lot 59	23.459 tons	Gross value	\$6,589
Shipped 6 Nov., 1952		Net Value	\$5,147.52
Truck Lot 60	11.441 tons	Gross value	\$2,918
Shipped 10 Nov., 1952		Net value	\$2,295.07
Truck Lot 61	12.4395 tons	Gross value	\$2,663
Shipped 14 Nov., 1952		Net value	\$2,039.75
Truck Lot 62	12.2715 tons	Gross value	\$2,696
Shipped 22 Nov., 1952		Net value	\$2,093.84
Truck Lot 63*	9.92 tons	Gross value	\$2,139
Shipped 26 Nov., 1952		Net value	\$1,700.29
Truck Lot 64*	11.40 tons	Gross value	\$2,445
Shipped 29 Nov., 1952		Net value	\$1,938.00
Zinc Lot 5**	47.00	Gross value	\$5,083
Shipped 21 Nov., 1952		Net Value	\$1,115

* Lead shipments, estimated values on mill assays
smelter sheets are not in on this date

**Zinc shipment, estimated value on mill assays
smelter sheets are not in on this date

Inventory:

Truck Lot 65	10.50 tons	Gross value	\$2356
		Net value	\$1732.50

Total Concentrates Produced:

Shipments	127.931 tons	\$24,533	\$15,214.47
Plus Nov. 30 Inv.	10.50	2,356	1,732.50
	138.431 tons	\$26,889	\$16,946.97
Less Oct. 31 Inv.	14.80	4,152	3,508.86
	24.00	2,977	810.05
	99.631 tons	\$19,760	\$12,628.06

PAYROLL FOR PERIOD:

	Bell	Carbonero	Total
Underground	18	7	25
Surface	12	2	14
Mill	9		9
Tailings pond	1		1
Ophir Corp.			7
Assaying			1
Engineering			2
Office			1
Supervision	3	1	4
Totals	43	10	54

Gross Payroll for November \$22,927.66

A. A. Smith
A. A. SMITH
General Manager

OPERATING REPORT OCTOBER 1952

FILE

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 400 Ida 13 E	1,537**		No contract
St 600 Carb 8 E	1,628		111.1 fathoms
	3,165 tons		

** Ore in stope previously mined over a period of several months and not previously reported.

DEVELOPMENT:

Drifts:

Drift, Butler 11 W	62		23.0 ft.
Drift, Butler 12 W	101		9.1 ft.
Drift, Ida 9 W	97*		33.8 ft.
Drift, Carb 8 E	215	39	47.7 ft.
Drift, Pan 8 E		73	3.5 ft.
	575 tons	112 tons	

Back stopes

Stope 800, Carb 8 E	3	3	19.5 fathoms
Stope 1, But 11 W			12.5 fathoms
	3 tons	3 tons	

Total ore mined:	3,643 tons
waste mined:	115 tons

* 97 tons tungsten ore

ORE INVENTORY:

	Tons	Value Per Ton
St 610, Ida 12 W	1,083	\$ 5.740
St 400, Ida 13 E	1,282	7.377
St 1, But 12 W	1,411	4.483
St 990, But 13 W	2,560	6.817
St 140, Carb 8 E	272	7.210
St 600, Carb 8 E	1,599	46.083
Old Carbonate stopes	10,006	11.840
Old Carbonate dump	38,577	4.372
	56,790 tons @ \$7.08/ton	\$402,236 Gross

TUNGSTEN ORE INVENTORY:

	Tons	Value per ton
Coarse ore bin	30	\$ 65.00
Rs 400, Ida 14 E	112	32.50
Rs 165, Ida 10, 11, 12, 13 W	100 - 243	37.70
Sacked ore	0.5	325.00
Broken ore in 6 level stopes	25	32.50
	357.5 tons	
Gross value	\$13,729	

Tungsten concentrates:	300 lbs. @ 42.6% WO ₃
Gross value	\$415

ORE TRAMMED: CAR FACTOR: 1.2135108 tons per car ASSAY FACTOR: 83.417

	Rs 165 Trf Ida 14 W	St 250 Trf Ida 14 E	Rs 175 Trf But 14 W	St 1 Trf But 14 W
Tons	508	309	462	140
Per Cent	16.939%	10.303%	15.405%	4.668%
Value	\$3.010	\$7.410	\$7.063	\$4.481
	St 865 Trf But 13 W	St 990 Trf But 13 W	Carbonero Ore	
Tons	243	183	1154	
Per Cent	8.103%	6.102%	38.480%	
Value	\$ 4.424	\$ 9.805	\$21.651	

Total Ore Trammed
111.1 tons per day

2999 tons

WASHING PLANT:

Tons of waste sorted: 538 tons
Per Cent of trammed ore: 17.93%

ORE MILLED:

	<u>Tonnage</u> <u>Period</u>	<u>To Date</u>	<u>Assay Values</u> <u>Period</u>		<u>To Date</u> <u>Gross</u>	<u>Net</u>
Bell	1514	22,527	Gross	Net	\$156,995	\$106,755
Carb	947	4,780	24,727	16815	103,643	70,478
Total	2461	27,307	\$35,564	\$24,184	\$260,638	\$177,233

<u>Assays:</u>		<u>Silver Bell</u>		<u>Carbonero</u>		<u>Combined</u>	
	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>Value</u>	
Au \$35	0.021	\$0.735	0.034	\$1.190	0.026	\$0.910	
Ag 90¢	3.821	3.439	4.289	3.860	4.001	3.601	
Pb 13.5¢	0.462	1.247	5.904	15.940	2.556	6.901	
Zn 12.5¢	0.152	0.380	1.592	3.980	0.706	1.765	
Cu 24.5¢	0.277	1.357	0.233	1.142	0.260	1.274	
Gross		\$7.158		\$26.112		\$14.451	
Net (68%)		\$4.687		\$17.756		\$9.827	

MILL OPERATION:

Ball mill grinding time: 497.00 hours

66.80% Efficiency

CONCENTRATES:

Shipments:

Truck Lot No. 54	11.9305 dry tons	Gross Value	\$1645
Shipped Oct. 2, 1952		Net Value	\$1227.87
Truck Lot No. 55	11.128 dry tons	Gross Value	\$1908
Shipped Oct. 3, 1952		Net Value	\$1511.74
Truck Lot No. 56	44.6915 dry tons	Gross Value	\$11308
Shipped Oct. 16, 1952		Net Value	\$8222.67
Truck Lot No. 57	17.8965 dry tons	Gross Value	\$4532
Shipped Oct. 20, 1952		Net Value	\$3301.70
Truck Lot No. 58	25.162 dry tons	Gross Value	\$6516
Shipped Oct. 29, 1952		Net Value	\$5119.78
Zinc No. 3	92.101 dry tons	Gross Value	\$9769
Shipped Oct. 7, 1952		Net Value	\$2231.57
Zinc No. 4	42.707 dry tons	Gross Value	\$3220
Shipped Oct. 21, 1952		Net Value	\$1424.57

Inventory:

Truck Lot No. 59	14.80 dry tons	Gross Value	\$4152
		Net Value	\$3580.86
Zinc No. 5	24.00 dry tons	Gross Value	\$2977
		Net Value	\$810.05

Total Concentrates Produced:

Shipments	245.6165	\$33,898	\$23,039.90
Plus Oct. 31 Inv.	14.80	4,152	3,508.86
	24.00	2,977	810.05
	<u>284.4165</u>	<u>\$41,027</u>	<u>\$27,430.81</u>
Less Sept. 30 Inv.	11.00	1,517	1,210.55
	106.17	14,246	6,271.47
	<u>167.2465</u>	<u>\$25,264</u>	<u>\$19,948.79</u>

PAYROLL FOR PERIOD:

	Bell	Carb	Total	
Underground	16	9	25	
Surface	12	2	14	
Mill	8		8	
Tailing Pond	2		2	
Ophir Corp.			7	
Assaying			1	
Engineering			2	
Office			2	
Supervision	3	1	4	
	<u>41</u>	<u>12</u>	<u>65</u>	
				Gross Payroll
				<u>for Period</u>
				\$26,544.16

SILVER BELL MINES COMPANY

General Superintendent

(file)

OPERATING REPORT SEPTEMBER 1952

ORE MINED:

PRODUCTION:

St 400 Ida 13 E
St 600 Carb 8 E
Carbonero Dump

Ore
198
1,237
55
1,490 tons

Waste

Advance
no contract
105.7 fathoms

DEVELOPMENT:

Drifts:

Drift But 11 W
Drift But 12 W
Drift Ida 9 W
Drift Carbonero 8 E
Drift Panama 8 E

145
137
92*
181
555 tons
2
88
221
311 tons

38.0 ft.
57.0 ft.
37.0 ft.
50.5 ft.
44.5 ft.

Total Ore Mined:
Waste Mined:

2,045 tons
311 tons
2,356 tons

*92 tons tungsten ore

ORE INVENTORY:

St 610 Ida 12 W
St 220 Ida 13 E
St 1 But 12 W
St 865 But 13 W
St 990 But 13 W
St 140 Carb 8 E
Old Carbonero Steps
St 600 Carb 8 E

Tons
1,591
54
1,951
98
2,642
272
10,006
907
17,521 tons
@10.810 per ton

Value
\$ 6.049
10.944
4.708
8.807
7.077
7.732
12.602
24.523

Gross Value
\$189,401

TUNGSTEN ORE INVENTORY:

Coarse Ore Bin
Rs 400 Ida 14 E
Rs 165 Ida 10, 11, 12, 13, W
Sacked Ore
Broken Ore in 6-level steps

Tons
30
112
242
0.5
25
409.5 tons
Gross Value \$14,430

Value
per ton
\$65.00
32.50
~~32.50~~
325.00
32.50

Tungsten Concentrates:

300 lbs. @ 42.6% WO₃
Gross Value \$415

ORE TRAMMED: GAR FACTOR 1.2128169 tons/car ASSAY FACTOR 69.78372%

	Rs 165 Trf Ida 14 W	St 250 Trf Ida 14 E	Rs 175 Trf But 14 W	St 1 Trf But 14 W
Tons	263	249	564	594
Per Cent	6.32%	5.99%	13.56%	14.28%
Value	\$3.626	\$5.410	\$10.354	\$5.658
	St 750 But 13 W	St 865 But 13 W	St 990 But 13 W	Carbonero Ore
Tons	216	1009	290	975
Per Cent	5.19%	24.25%	6.97%	23.44%
Value	\$3.342	\$2.646	\$7.126	\$25.429

Total Ore Trammed: 4160 tons
166.4 tons per day.

WASHING PLANT:

Tons of waste sorted: 621 tons
Per Cent of Trammed Ore: 14.93%

ORE MILLED:

	Tonnage		Assay Values		To Date	
	Period	To Date	Gross	Net	Gross	Net
Bell	2710	21,013	\$18,824	\$12,800	\$146,158	\$99,386
Carb	829	3,833	\$22,929	\$15,592	\$78,916	\$53,663
Totals	3539	24,846	\$41,753	\$28,392	\$225,074	\$153,049

	Assays		Assays		Assays	
	Silver Ball		Carbonero		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.094	\$1.192	0.051	\$1.787	0.038	\$1.330
Ag 90¢	2.985	2.687	7.312	6.581	4.000	3.600
Pb 16¢	0.324	1.037	4.277	13.686	1.250	4.000
Zn 13.5¢	0.257	0.678	1.288	3.478	0.494	1.334
Cu 24.5¢	0.278	1.352	0.434	2.127	0.313	1.534
Gross		\$6.946		\$27.659		\$11.798
Net (68%)		\$4.723		\$18.808		\$8.023

MILL OPERATION:

Ball Mill Grinding Time: 684.75 Hr. 95.10% Efficiency

CONCENTRATES:

Shipments:

Truck Lot No. 44	12.5065 dry tons	Gross Value	\$2,862
Shipped Sept. 7, 1952		Net Value	\$2,262.68
Truck Lot No. 45	10.6465 dry tons	Gross Value	\$2,378
Shipped Sept. 9, 1952		Net Value	\$1,885.18
Truck Lot No. 46	12.2910 dry tons	Gross Value	\$3,010
Shipped Sept. 11, 1952		Net Value	\$2,402.22
Truck Lot No. 47	10.7470 dry tons	Gross Value	\$2,946
Shipped Sept. 12, 1952		Net Value	\$2,392.49
Truck Lot No. 48	11.3805 dry tons	Gross Value	\$3,355
Shipped Sept. 15, 1952		Net Value	\$2,751.64
Truck Lot No. 49	10.5955 dry tons	Gross Value	\$2,094
Shipped Sept. 17, 1952		Net Value	\$1,655.60
Truck Lot No. 50	11.3115 dry tons	Gross Value	\$3,074
Shipped Sept. 19, 1952		Net Value	\$2,500.97
Truck Lot No. 51	11.1020 dry tons	Gross Value	\$3,364
Shipped Sept. 22, 1952		Net Value	\$2,745.32
Truck Lot No. 52	12.1600 dry tons	Gross Value	\$3,858
Shipped Sept. 25, 1952		Net Value	\$3,162.16
Truck Lot No. 53	12.1845 dry tons	Gross Value	\$3,559
Shipped Sept. 30, 1952		Net Value	\$2,830.31

Inventory:

Truck Lot No 54	11.00 dry tons	Gross Value	\$1,517
		Net Value	\$1,210.55
Lot Z-3 (sine)	106.17 dry tons	Gross Value	\$14,246
		Net Value	\$6,271.47

Total Concentrates Produced:

Shipments	114.9250	\$30,500	\$24,588.57
Plus Sept. 30, Inv.	11.00	\$1,517	\$1,210.55
	106.17	\$14,246	\$6,271.47
	232.095	\$46,263	\$32,070.59
Less Aug. 31, In.	69.58	\$10,167	\$5,048.46
	162.515	\$36,096	\$27,022.13

PAYROLL FOR PERIOD:

	Bell	Carb	Total	
Underground	18	11	29	
Surface	8	2	10	
Mill	9		9	
Tailing Pond	2		2	
Ophir Corp.			13	
Assaying			1	
Engineering			1 - 2	
Office			2	
Supervision	3	1	5	
	40	15	72	
				<u>Gross Payroll</u>
				<u>for Period</u>
				\$27,984.93

SILVER BELL MINES COMPANY

M. H. Smith
General Superintendent

(file copy)

OPERATING REPORT August 1-31, 1952

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 400 Ida 13 E	155		9.7 fathoms
St 990 But 13 W	482		30.4 fathoms
St 140 Carb 8 E	291		16.8 fathoms
St 600 Carb 8 E	475		38.9 fathoms
Carbonere Dump	304		
	1,707 tons		

DEVELOPMENT:

Raises:		
St 990 But 13 W	28	18.0 feet

Drifts:		
Drift But 11 W	127	32.5 feet
Drift But 12 W	20	18.0 feet
Drift Ida 9 W	69	11.0 feet
Drift Carb 8 E	301	58.5 feet
Drift Panama 8 E		15.0 feet
	545 tons	131 tons

Total Ore Mined:	2,252 tons
Waste Mined:	131 tons
	2,383 tons

ORE INVENTORY:

	Tons	
St 610 Ida 12 W	1854	\$ 6.071
St 200 Ida 13 E	105	10.972
St 1 But 12 W	2964	4.738
St 750 But 13 W	191	7.574
St 865 But 13 W	1107	8.838
St 990 But 13 W	2781	7.103
St 140 Carb 8 E	481	7.783
St 600 Carb 8 E	200	13.566
Old Carb Stopes	10006	12.681
In Transfers	14	8.795
	19,703 tons	
	@ \$9.689/ton	Gross Value \$190,901

TUNGSTEN ORE INVENTORY

	Tons	Value per ton
Coarse Ore Bin	30	\$65.00
Rs 400 Ida 14 E	112	32.50
Rs 165 Ida 10 W	150	32.50
Sacked ore	0.5	325.00
Broken ore in 6-level St.	25	32.50
	317.5 tons	
	Gross Value \$11,440	

Tungsten Concentrate:	300 lbs. @ 42.6% WO ₃
	Gross Value \$415

ORE TRAMMED: CAR FACTOR 1.05478 tons/car Assay Factor 83.722%

	Rs 165 Trf Ida 14 W	St 250 Trf Ida 14 W	Rs 175 Trf But 14 W	St 1 Trf But 14 W
Tons	60	266	443	305
Per Cent	1.52%	6.73%	11.20%	7.71%
Value	\$2.616	\$8.615	\$6.313	\$7.723
	St 750 But 13 W	St 865 But 13 W	St 990 But 13 W	Carbonero Ore
Tons	596	957	260	1068
Per Cent	15.07%	24.20%	6.57%	27.00%
Value	\$4.417	\$5.057	\$8.303	\$12.424

Total Ore Trammed: 3955 tons
Daily Average: 152.1 tons/day

WASHING PLANT:

Tons of Waste Sorted: 701 tons
Per Cent of Trammed Ore: 17.73%

ORE MILLED:

	Tonnage		Assay Values		To Date	
	Period	To Date	Period	Net	Gross	Net
Bell	2375	18,303	\$18,492	\$12,575	\$127,334	\$86,568
Carb	879	3,004	\$12,008	\$8,165	\$55,987	\$38,071
Totals	3254	21,307	\$30,500	\$20,740	\$183,321	\$124,657

	Assays		Assays		Assays	
	Silver Bell	Carbonero	Silver Bell	Carbonero	Combined	Value
Au \$35	0.030	\$1.050	0.034	\$1.190	0.031	\$1.085
Ag 90%	3.940	3.545	3.429	3.084	3.802	3.422
Pb 16%	0.447	1.430	1.809	5.789	0.815	2.608
Zn 14%	0.251	0.703	0.655	1.834	0.360	1.008
Cu 24.5%	0.216	1.058	0.360	1.764	0.255	1.250
Gross		\$7.786		\$13.661		\$9.373
Net (68%)		\$5.295		\$9.289		\$6.374

MILL OPERATION:

Ball Mill Grinding time: 670.25 Hr. 90.09% Efficiency

CONCENTRATES:

Shipments:

Truck Lot No. 36--11.470 dry tons Shipped August 3, 1952	Gross Value \$3,174 Net Value \$2,616.47
Truck Lot No. 37--11.8285 dry tons Shipped August 8, 1952	Gross Value \$3,356 Net Value \$2,756.88
Truck Lot No. 38--11.661 dry tons Shipped August 11, 1952	Gross Value \$3,496 Net Value \$2,902.87
Truck Lot No. 39--11.701 dry tons Shipped August 18, 1952	Gross Value \$3,619 Net Value \$3,047.66
Truck Lot No. 40--11.4165 dry tons Shipped August 21, 1952	Gross Value \$3,319 Net Value \$2,719.96
Truck Lot No. 41--10.4945 dry tons Shipped August 25, 1952	Gross Value \$2,124 Net Value \$1,678.97
Truck Lot No. 42--12.122 dry tons Shipped August 27, 1952	Gross Value \$1,986 Net Value \$1,546.93
Truck Lot No. 43--14.2015 dry tons Shipped August 30, 1952	Gross Value \$3,130 Net Value \$2,463.29

Inventory:

Truck Lot No. 44--8.78 dry tons	Gross Value \$2,009 Net Value \$1,457
Lot 2-3 (zinc)--60.8 dry tons	Gross Value \$8,158 Net Value \$3,591

Total Concentrates Produced:

Shipments	94.895	\$24,204	\$19,733.03
Plus Aug. 31, Inv.	8.78	\$2,009	\$1,457
	60.8	\$8,158	\$3,591
	164.475	\$34,371	\$24,781.03
Less July 31, Inv.	30.2	\$4,052	\$1,784
	134.275 tons	\$30,319	\$22,997.03

PAYROLL FOR PERIOD:

	Bell	Carb	Total	
Underground	19	12	31	
Surface	19	2	21	
Mill	9		9	
Tailing Pond	4		4	
Assaying			1	
Engineering			2	
Office			2	
Supervision	3	2	5	
	54	16	70	
				Gross Payroll for Period
				\$27,628.23

SILVER BELL MINES CO.

H. A. Smith
General Superintendent

(File)

OPERATING REPORT JULY 1-31, 1952

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 865 But 13 W	52		3.5 fathoms
St 990 But 13 W	577		34.6 fathoms
St 140 Carb 8 E	260		18.6 fathoms
	<u>889</u> tons		

DEVELOPMENT:

<u>Raises:</u>			
St 865 But 13 W	26		16.5 feet
St 990 But 13 W	46		23.0 feet
<u>Drifts:</u>			
Drift Ida 9 W	50	100	50.0 feet
Drift But 11 W	212		61.5 feet
Drift But 12 W	25		9.5 feet
Drift Carb 8 E	85		19.0 feet
Drift Pan 8 E		112	10.5 feet
	<u>444</u> tons	<u>212</u> tons	

Total Ore Mined:	1333 tons
Waste Mined:	212 tons

ORE INVENTORY:

	Tons	Value per ton
St 610 Ida 12 W	1914	\$ 6.149
St 220 Ida 13 E	216	\$ 11.073
St 1 But 12 W	3280	\$ 4.848
St 750 But 13 W	787	\$ 7.683
St 865 But 13 W	2064	\$ 8.949
St 990 But 13 W	2271	\$ 7.037
St 140 Carb 8 E	378	\$ 4.424
Carbonate Stopes	10006	\$ 12.972
In Transfers	254	\$ 7.037
	<u>21,170</u> tons	
	@ \$9.628/ton Gross Value \$203,818	

TUNGSTEN ORE INVENTORY:

	Tons	Value per ton
Coarse Ore Bin	30	\$ 65.00
Rs 400 Ida 14 E	112	\$ 32.50
Sacked Ore	0.5	\$325.00
Broken Ore in 6-level st.	25	\$ 32.50
	<u>167.5</u> tons	
	Gross Value \$ 6565.	

Tungsten Concentrate:

300 lbs. @ 42.6%	Gross Value \$415.
------------------	--------------------

ORE TRAMMED: Car factor 1.170 tons/car (62.519%) ---- Assay Factor

	Rs 165 Trf Ida 14 W	St 1 Trf But 14 W	St 750 But 13 W	Rs 175 But 14 W	St 865 But 13 W
Tons	12	727	679	304	90
Per Cent	0.4%	26.2%	24.4%	11.0%	3.2%
Value	\$4.374	\$7.323	\$3.009	\$4.890	\$5.532

	St 990 But 13 W	Drift But 12 W	Carbonero Ore
Tons	173	25	768
Per Cent	6.2%	0.9%	27.7%
Value	\$7.341	\$9.215	\$23.514

Total Ore Trammed: 2778 tons
Daily Average: 106.84 tons

WASHING PLANT:

Tons of Waste Sorted: 507 tons
Per Cent of Trammed Ore: 18.23 %

ORE MILLED:

	Tonnage		Assay Value		To Date	
	Period	To Date	Gross	Net	Gross	Net
Bell	1643	15,928	\$14,235	\$ 9,680	\$108,842	\$74,011
Carb	628	2,125	\$14,727	\$10,014	\$ 43,979	\$29,906
Totals	2271	18,053	\$28,962	\$19,694	\$152,821	\$103,917

	Silver Bell		Carbonero		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.029	\$1.012	0.022	\$0.769	0.027	\$0.945
Ag 90¢	4.476	4.028	6.552	5.897	5.050	4.545
Pb 16¢	0.523	1.674	3.405	10.896	1.320	4.224
Zn 15.83¢	0.283	0.896	0.995	3.150	0.480	1.520
Cu 24.5¢	0.215	1.054	0.559	2.739	0.310	1.519
Gross		\$8.664		\$23.451		\$12.753
Net 68%		\$5,892		\$15.946		\$ 8.672

MILL OPERATION:

Ball Mill Grinding Time: 572.50 Hr. 76.95% Efficiency

CONCENTRATES:

SHIPMENTS:

Truck Lot No 29--11.2360 dry tons Shipped July 2, 1952	Gross Value \$3,620 Net Value \$3,001.62
Truck Lot No 30--13.5165 dry tons Shipped July 12, 1952	Gross Value \$4,196 Net Value \$3,420.82
Truck Lot No 31--9.5910 dry tons Shipped July 15, 1952	Gross Value \$3,006 Net Value \$2,448.38
Truck Lot No 32--12.9270 dry tons Shipped July 18, 1952	Gross Value \$4,008 Net Value \$3,256.42
Truck Lot No 33--10.8140 dry tons Shipped July 23, 1952	Gross Value \$3,262 Net Value \$2,664.53
Truck Lot No 34--12.9455 dry tons Shipped July 28, 1952	Gross Value \$3,286 Net Value \$2,652.79
Truck Lot No 35--9.8775 dry tons Shipped July 31, 1952	Gross Value \$2,425 Net Value \$1,958.33
Truck Lot No Z-2--9.8575 dry tons Shipped July 9, 1952	Gross Value \$1,323 Net Value \$ 582.47

INVENTORY:

Lot No Z-3---(Zinc) 30.2 dry tons	Gross Value \$4052 Net Value \$1784
Total Concentrates Produced	Tons Gross Net
Shipments	90.765 \$25,126 \$19,985.36
Plus July 31 Inventory	30.2 \$ 4,052 \$ 1,784.
	120.965 \$29,178 \$21,769.36
Less June 30 Inventory	25.72 \$ 4,055 \$ 3,353.
	95.245 \$25,123 \$18,416.36

PAYROLL FOR PERIOD:

	Bell	Carb	Total	
Underground	20	12	32	
Surface	15	6	21	
Mill	12		12	
Tailing Pond	3		3	
Assaying			1	
Engineering			2	
Office			2	
Supervision	3	2	5	
	53	20	78	
				<u>Gross Payroll</u>
				<u>For Period:</u>
				\$26,765.75

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

OPERATING REPORT JUNE 2-30, 1952

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 865 But 13 W	191		12.4 fathoms
St 990 But 13 W	436		20.9 fathoms
	627 tons		

DEVELOPMENT:

Raises:		
St 865 But 13 W	6	6 feet
Drifts:		
Drift But 11 W	104	43.5 feet
Drift But 12 W	121	40.0 feet
Drift Ida 9 W		68 26.0 feet
Drift Pan 8 W		40 12.0 feet
Drift Pan 8 E		113 25.5 feet

Backstopping:		
Drift Carb 8 E	381 <i>less 175 tons</i>	
	1112 tons	221 tons

Total Ore Mined:	1739 tons
Waste Mined:	221 tons

ORE INVENTORY:

	Tons	Value per ton
St 610 Ida 12 W	1926	\$ 6.149
St 220 Ida 13 E	216	\$ 11.073
St 1 But 12 W	3342	\$ 4.848
St 750 But 13 W	1466	\$ 7.683
St 865 But 13 W	2061	\$ 8.948
St 990 But 13 W	1821	\$ 6.445
St 140 Carb 8 E	312	\$ 5.995
Carbonero Filled Stopes	10020	\$ 12.972
Drift Carb 8 E	600	\$ 25.247
In Transfers	299	\$ 6.224
	22,063 tons	
	@ \$10.005/ton	Gross Value \$220,736

TUNGSTEN ORE INVENTORY: @ \$65/unit

	Tons	
Coarse Ore Bin	30	\$ 65.00
R# 400 Ida 14 E	156	\$ 32.50
Sacked Ore	1	\$ 325.00
Broken Ore in 6-level stopes	25	\$ 32.50
	212 tons	
		Gross Value \$8158.

Tungsten Concentrate:

90 lbs @ 42.6% WO ₃	Gross Value \$125.00
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2

ORE TRAMMED: Car Factor 1.349 tons/ear (84.722)% ---- Assay Factor

	Rs 165 Trf Ida 14 W	St 250 Trf Ida 14 E	St 1 Trf But 14 W	St 750 But 13 W	Rs 175 But 14 W
Tons	210	175	1101	714	81
Per Cent	6.7%	5.6%	35.1%	22.8%	2.6%
Value	\$5.849	\$7.869	\$5.786	\$5.047	\$2.44
	St 865 But 13 W	St 990 But 13 W	Drift But 12 W	Carbonero Ore	
Tons	73	251	121	412	
Per Cent	2.3%	7.9%	3.9%	13.1%	
Value	\$6.762	\$4.373	\$10.530	\$26.952	
Total Ore Trammed:	3138 tons				
Daily Average:	125.52 tons				

WASHING PLANT:

Tons of Waste Sorted: 568 tons
Per Cent of Trammed Ore: 18.10%

ORE MILLED:

	Tonnage		Assay Value			Net
	Period	To Date	Period Gross	Net	To Date Gross	
Bell	2,237	14,285	\$15,867	\$11,469	\$94,607	\$64,331
Carb	333	1,497	\$ 9,879	\$ 6,718	\$29,252	\$19,592
Totals	2,570	15,782	\$26,746	\$18,187	\$123,859	\$84,223

	Silver Bell		Carbonero		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.025	\$0.877	0.040	\$1.400	0.027	\$0.945
Ag 90%	4.136	3.722	8.490	7.641	4.700	\$4.230
Pb 16%	0.416	1.331	3.989	12.765	0.879	\$2.813
Zn 15.83%	0.250	0.792	1.269	4.018	0.382	\$1.209
Cu 24.5%	0.167	0.818	0.784	3.842	0.247	\$1.210
Gross		\$7.540		\$29.565		\$10.407
Net (68%)		\$5.127		\$20.174		\$ 7.077

MILL OPERATION:

BALL MILL Grinding Time: 610.50 Hr. 84.79% Efficiency

CONCENTRATES:

SHIPMENTS:

Truck Lot No 24--11.425 dry tons Shipped June 2, 1952 <i>Leadville Lot 22</i>	Gross Value \$4,547 Net Value \$3,817
Truck Lot No 25--11.664 dry tons Shipped June 9, 1952 <i>Leadville Lot 23</i>	Gross Value \$4,155 Net Value \$3,488
Truck Lot No 26--10.95 dry tons Shipped June 17, 1952 <i>Leadville Lot 26</i>	Gross Value \$3,711 Net Value \$3,125
Truck Lot No 27--12.65 dry tons Shipped June 24, 1952	Gross Value \$4,224 Net Value \$3,460
Truck Lot No 28--10.60 dry tons Shipped June 27, 1952	Gross Value \$3,010 Net Value \$2,332
Truck Lot No 2-1 Zinc Conc--10.44 Dry tons Shipped June 30, 1952	Gross Value \$ 569 Net Value \$ 442

INVENTORY:

Lot No 29 (Lead) -- 10.72 dry tons	Gross Value \$3238 Net Value \$2718
Lot No 3-2 (Zinc) -- 15.0 dry tons	Gross Value \$ 817 Net Value \$ 635
Total Concentrates Produced: 68.71 dry tons	Gross Value \$18,010 Net Value \$14,797

PAYROLL FOR PERIOD:

	Bell	Carb	Total	
Underground	20	10	30	
Surface	10	6	16	
Mill	10		10	
Tailing Pond	3		3	
Assaying			1	
Engineering			1	
Office			2	
Supervision	3	1	4	
	<u>46</u>	<u>17</u>	<u>67</u>	
				Gross Payroll for Period: \$25,007.55

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

OPERATING REPORT MAY 1-31, 1952

(File)

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 865 But 13 W	263		17.3 fathoms
St 990 But 13 W	985		53.0 fathoms
	1,248 tons		

DEVELOPMENT:

Drifts:			
Drift Carb 8 E	489		36.0 feet
Drift But 12 W	201		88.5 feet
Drift Ida 9 W		114	36.0 feet
	690 tons	114 tons	

Total Ore Mined: 1938 tons
Waste Mined: 114 tons
2052 tons

ORE INVENTORY:

	Tons	Value per ton
St 610 Ida 12 W	2123	\$ 6.277
St 220 Ida 13 E	391	11.237
St 1 But 12 W	3342	5.051
St 90 But 13 E	1048	5.561
St 750 But 13 W	2180	7.881
St 865 But 13 W	1915	9.207
St 990 But 13 W	1603	6.872
St 140 Carb 8 E	312	6.471
Carbonero Stopes	5108	9.814
Drift Carb 8 E	125	23.461
In Transfers	397	6.796
	18,544 tons	
	@ \$7.767/ton	Gross Value \$144,036

TUNGSTEN ORE INVENTORY:

Coarse Ore Bin	63	\$ 63.87
Rs 400 Ida 14 E	156	31.85
Sacked Ore	1	325.00
Broken Ore in 6-level stopes	25	31.85
	245 tons	
	Gross Value \$10,114	

ORE TRAMMED: Car Factor 1.161 tons/car Assay Factor 95.693%

	Rs 165 Trf	St 250 Trf	St 1 Trf	St 750
	Ida 14 W	Ida 14 E	But 14 W	But 13 W
Tons	603	58	940	370
Per Cent	18.4%	1.8%	28.7%	11.3%
Value	\$4.495	\$5.117	\$6.705	\$3.717
	St 865	St 990	Drift	Carbonero
	But 13 W	But 13 W	But 12 W	Ore
Tons	187	509	201	407
Per Cent	5.7%	15.6%	6.1%	12.4%
Value	\$6.684	\$5.454	\$8.240	\$20.166

Total Ore Trammed: 3275 tons
Daily Average: 125.27 tons

WASHING PLANT:

Tons of Waste Sorted: 528 tons
Per Cent of Trammed Ore: 16.12%

ORE MILLED:

	Tonnage		Assay Value			
			Period		To Date	
	Period	To Date	Gross	Net	Gross	Net
Bell	2,406	12,048	\$16,575	\$11,271	\$77,740	\$52,862
Carb	341	1,164	\$8,000	\$5,440	\$19,373	\$13,174
Totals	2,747	13,212	\$24,575	\$16,711	\$97,113	\$66,036

	Assays					
	Silver Bell		Carbonere		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.028	\$ 0.981	0.012	\$ 0.419	0.026	\$ 0.910
Ag 90¢	3.701	3.331	3.379	3.041	3.661	3.295
Pb 15.731¢	0.335	1.054	3.968	12.484	0.786	2.473
Zn 19.5¢	0.202	0.788	1.112	4.337	0.315	1.229
Cu 24.5¢	0.150	0.735	0.649	3.180	0.212	1.039
Gross		\$ 6.889		\$23.461		\$ 8.946
Net (68%)		\$ 4.685		\$15.953		\$ 6.083

MILL OPERATION:

Ball Mill Grinding Time: 574.25 Hr. 77.18% Efficiency

CONCENTRATES:

SHIPMENTS:

Truck Lot No 20--11.59 dry tons Shipped May 5, 1952 <i>Leadville Lot 18</i>	Gross Value \$ 5,083 Net Value \$ 4,288
Truck Lot No 21--11.25 dry tons Shipped May 13, 1952 <i>Leadville Lot 19</i>	Gross Value \$ 3,977 Net Value \$ 3,467
Truck Lot No 22--11.82 dry tons Shipped May 19, 1952 <i>Leadville Lot 20</i>	Gross Value \$ 3,275 Net Value \$ 2,663
Truck Lot No 23--11.40 dry tons Shipped May 26, 1952 <i>Leadville Lot 21</i>	Gross Value \$ 4,286 Net Value \$ 3,534

INVENTORY:

Lots No 24 & 25--14.30 dry tons	Gross Value \$ 5,692 Net Value \$ 4,778
Lot No Z-1 (sino) 10.44 dry tons	Gross Value \$ 569 Net Value \$ 442
Total Concentrates Produced: 59.96 dry tons	Gross Value \$18,065 Net Value \$15,161

PAYROLL FOR PERIOD:

	Bell	Carb	Total	
Underground	19	5	24	<u>Gross Payroll for Period:</u> \$19,988.25
Surface	11	3	14	
Mill	6		6	
Tailing Pond	3		3	
Assaying			1	
Engineering			2	
Office			2	
Adm. & Super.	3	1	4	
	42	9	56	

SILVER BELL MINES COMPANY

H. J. Smith
General Superintendent

Ophir, Colorado
June 30, 1952

SUBJECT: Operating Report Changes

Beginning in March the operating report was put on a monthly basis instead of bi-monthly. This was done to reduce the amount of time necessary to prepare the report.

The value of the ore in inventory was raised in this, the April report. Previous to 1952, all grab sample assays were reduced to 75 per cent of the reported value as these assays are consistently high. However, a comparison of the value of the ore trammed from the mine based on grab samples, and the value of the ore milled based on head feed samples, for the year 1951, gave a factor of 84 per cent.

Previous to March 1952, the ore inventory was valued on the 75 per cent basis. The March report shows the ore inventory which was carried over from 1951 valued on the 84 per cent basis. This increases the reported value of our ore reserves.

For the year 1952 an assay factor has been computed for each period that an operating report was made and the grab assays of the ore mined in each period were weighted by the assay factor for that period.

The value of the ore in inventory will be increased again in the operating report for May to account for the zinc values which have been neglected previously. We are accounting for the zinc because we have begun making a zinc concentrate in our mill.

Melvin Carlson

Melvin Carlson
Resident Engineer

OPERATING REPORT APRIL 1-30, 1952

(Wilfley)

ORE MINED:

PRODUCTION:

St 750 But 13 W	Ore	Advance
St 865 But 13 W	96	5.4 fathoms
St 990 But 13 W	744	48.5 "
	905	47.4 "
	1745 tons	

DEVELOPMENT:

Raises:	Ore	
St 750 But 13 W Fingers	32	13.0 feet
Drifts:		
Drift But 12 W	188	78.5 feet
X-cut Ida 9 W	48	22.0 "
	268 tons	

Total Ore Mined: 2013 tons

ORE INVENTORY:

St 610 Ida 12 W	Tons	Value per ton
St 730 Ida 12 W	2196	\$5.684
St 220 Ida 13 E	482	5.684
St 1 But 12 W	449	10.481
St 90 But 13 E	3342	4.030
St 750 But 13 W	1988	4.511
St 865 But 13 W	2550	6.891
St 990 But 13 W	1876	8.442
In Transfers	1127	7.033
St 140 Carb 8 E	408	6.390
Carbonero Stopes	312	5.136
	5151	8.371
	19,881 tons	
	\$46.59/ton	Gross Value \$131,027

TUNGSTEN ORE INVENTORY:

Coarse ore Bin	Tons	Value per ton
Ra 400 Ida 14 E	63	\$ 63.87
Sacked Ore	156	31.85
	1	325.00
	220 tons	
		Gross Value \$ 9,318

ORE TRAMMED: Car Factor 1.10716 tons/car; Assay Factor 95.07357%

St 1 Trf But 14 W	Ra 175 Trf But 14 W	St 750 But 13 W	St 865 But 13 W	St 990 But 13 W	St 920 But 14 W
Tons 544	23	368	413	163	299
Per Cent 15.3%	0.7%	10.4%	11.6%	4.6%	8.4%
Value \$3.779	\$6.831	\$5.134	\$9.395	\$7.587	\$4.966
Drift But 12 W	St 250 Ida 14 E	Ra 165 Trf Ida 14 W	X-Out Ida 9 W		
Tons 188	687	814	48		
Per Cent 5.3%	19.4%	22.9%	1.4%		
Value \$6.741	\$5.083	\$4.172	\$1.530		
Total Ore Trammed:	3547 tons				
Daily Average:	136.4 tons				

WASHING PLANT:

Tons of Waste Sorted: 654 tons
Per Cent of Trammed Ore: 18.4%

ORE MINLED:

	Tonnage		Assay Value			
	Period	To Date	Period	Net	To Date	Net
Bell	2,893	9,642	\$18,932	\$12,874	\$ 61,165	\$ 41,591
Carb	---	823	---	---	\$ 11,373	\$ 7,734
Totals	2,893	10,465	\$18,932	\$12,874	\$ 72,538	\$ 49,325

Assays			
Silver Bell			
	Assay	Value	
Au \$35	0.029	\$ 1.015	
Ag 90¢	3.429	3.086	
Pb 18¢	0.465	1.674	
Zn 19.5¢	0.296	--	
Cu 24.5¢	0.157	0.769	
	Gross	\$ 6.504	
	Net (68%)	\$ 4.450	
Zn Gross		\$ 1.154	

MILL OPERATION:

Ball Mill Grinding Time: 660.75 Hr. : 91.77% Efficiency

CONCENTRATES:

SHIPMENTS:

Truck Lot No 18--10.63 dry tons	Gross Value	\$ 5,427
Shipped Apr 14, 1952	Net Value	\$ 4,701
<i>To Midvale</i>		
Truck Lot No 19--10.89 dry tons	Gross Value	\$ 5,548
Shipped Apr 23, 1952	Net Value	\$ 4,770
<i>Leadville Lot 17</i>		

INVENTORY:

Truck Lot No 20--10.84 dry tons	Gross Value	\$ 4,817
	Net Value	\$ 4,011
Total Concentrates Produced:	Gross Value	\$15,792
32.36 dry tons	Net Value	\$13,482

PAYROLL FOR PERIOD:

	Bell	Carb	Total	Gross Payroll For Period:
Underground	23		23	\$19,357.29
Surface	5	3	8	
Mill	13		13	
Tailing Pond	4		4	
Assaying			1	
Engineering			2	
Office			2	
Adm. & Super.	2	1	3	
	47	4	56	

SILVER BELL MINES COMPANY

H. A. Smith
General Superintendent

MONTHLY OPERATING REPORT MARCH 1-31, 1952

(file copy)

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 750 But 13 W	1417		65.8 fathoms
St 865 But 13 W	745		49.7 "
St 990 But 13 W	693		38.5 "
St 140 Car 8 E	86		7.5 "
	<u>2941</u>	tons	

DEVELOPMENT:

	Ore	Waste	Advance
<u>Raises;</u>			
St 1 But 12 W--175 Rs	103		10.0 feet
<u>Drifts;</u>			
Drift Carb 8 E	234	33	69.5 feet
Drift But 12 W	106		40.5 "
Drift Lookout E	8	30	10.0 "
	<u>451</u>	<u>63</u>	T T

Total Ore Mined: 3392 tons
Waste Mined: 63 tons
3455 tons

ORE INVENTORY:

	Tons	Value per ton
St 610 Ida 12 W	2196	\$3.62
St 730 Ida 12 W	1263	4.82
St 220 Ida 13 E	792	9.21
St 250 Ida 14 E	87	5.89
St 1 But 12 W	3342	3.83
St 90 But 13 E	2532	4.04
St 920 But 14 W	299	3.38
St 750 But 13 W	2790	6.04
St 865 But 13 W	1490	7.29
St 990 But 13 W	672	6.40
In Transfers	489	7.18
St 140 Carb 8 E	312	6.90
Carbonero Stopes	5151	8.36
	<u>21,415</u>	tons
	@\$5.91/ton	Gross Value \$126,566

TUNGSTEN ORE INVENTORY:

	Tons	Value Per ton
Coarse Ore Bin	63	\$ 63.87
Rs 400 Ida 14 E	156	31.85
Sacked Ore	1	325.00
	<u>220</u>	tons
		Gross Value \$9,318

ORE TRAMMED: Car Factor 0.9316 tons/car; Assay Factor 92.89%

	St 1 Trf But 14 W	Rs 175 Trf But 14 W	St 750 But 13 W	St 865 But 13 W	St 990 But 13 W	St 920 But 14 W
Tons	14	79	525	230	347	363
Per Cent	0.5%	2.8%	18.4%	8.1%	12.2%	12.7%
Value	\$10.77	\$6.08	\$5.76	\$5.74	\$7.13	\$3.47
	Drift But 12 W	St 250 Ida 14 E	Rs 165 Trf Ida 14 W	Drift Lookout E	Carbonero Ore	
Tons	106	314	552	8	315	
Per Cent	3.7%	11.0%	19.3%	0.3%	11.0%	
Value	\$4.31	\$5.84	\$3.22	\$2.93	\$8.43	

Total Ore Trammed: 2853 tons
Daily Average: 101.9 tons

WASHING PLANT:

Tons of Waste Sorted: 455 Tons
Per Cent of Trammed Ore: 15.9%

ORE MILLED:

	<u>Tonnage</u>		<u>Assay Value</u>			
	<u>Period</u>	<u>To Date</u>	<u>Period</u>		<u>To Date</u>	
			<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Bell	2,133	6,749	\$12,713	\$8,645	\$42,233	\$28,717
Carb	265	823	\$2,742	\$1,865	\$11,373	\$7,734
Totals	2,398	7,572	\$15,455	\$10,510	\$53,606	\$36,451

	<u>Silver Bell</u>		<u>Carbonero</u>		<u>Combined</u>	
	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>Value</u>
Au \$35	0.026	\$0.910	0.017	\$0.596	0.025-	\$0.875
Ag 90%	3.254	2.929	1.915	1.724	3.106	2.795
Pb 19%	0.383	1.455	1.867	7.095	0.547	2.079
Zn 19.5%	0.302	---	1.949	---	0.484	---
Cu 24.5%	0.136	0.666	0.190	0.931	0.142	0.692
Gross		\$5.960		\$10.346		\$6.445
Net (68%)		\$4.053		\$7.038		\$4.383
Zn Gross		\$1.178		\$7.601		\$1.888

MILL OPERATION:

Ball Mill Grinding Time: 553.75 Hr.; 74.4% Efficiency

CONCENTRATES:

SHIPMENTS:

Truck Lot No 15--13.80 dry tons Gross Value \$ 6,035
Shipped Mar 12, 1952 Net Value \$ 5,175

Truck Lot No 16--12.00 dry tons Gross Value \$ 4,576
Shipped Mar 20, 1952 Net Value \$ 3,924
To Midvale

Truck Lot No 17--12.76 dry tons Gross Value \$ 5,656
Shipped Mar 31, 1952 Net Value \$ 4,850
Ledville Lot 16

INVENTORY:

None

Total Concentrates Produced: 33.20 dry tons
Gross Value \$13,976
Net Value \$11,939

PAYROLL FOR PERIOD:

	<u>Bell</u>	<u>Carb</u>	<u>Total</u>	
Underground	24	5	29	
Surface	9	2	11	<u>Gross Payroll for Period:</u>
Mill	10		10	
Tailing Pond	1		1	\$21,069.39
Assaying			1	
Engineering			2	
Office			2	
Adm. & Super.	2	1	3	
	46	8	54	

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

15.0

SILVER BELL INDUSTRIES

Carbonero Mine

Valuation of Carbonero Dump

1952

VALUATION OF CARBONERO DUMP

M. Carlson 12/2/52

Tonnage

Calculated tonnage from survey		39,614
Dump Tons Mined	359	
Waste from present operations	678	
Waste mined from Shoofly Crosscut	8,988	10,025
		<u>29,589 tons</u>

Value

Oct. 30. Metal prices	Average value of Samples #1, #2, #6, & #9
Au \$35	
Ag 90¢	
Pb 13.5¢	\$4.971 per ton
Zn 12.5¢	
Cu 24.5¢	

29,589 tons @ \$4.971 per ton ---- \$147,087 Gross

#1	#2	#6	#7
0.088	0.175	2.175	0.082
0.405	1.530	0.450	0.790
1.425	5.130	0.270	2.970
0.875	0.525	1.375	2.125
0.196	0.245	0.294	0.372
<u>#2.049</u>	<u>#7.705</u>	<u>#2.564</u>	<u>#6.565</u>

41 119.883
#4.970

Au 35
 Ag 90¢
 Pb 135¢
 Cu 245¢
 Zn 125

Shoofly tunnel X-cut
2244 ft North Star to Carbonero
5 x 7 section

$$\begin{array}{r} 2244 \times 35 = 78540 \text{ cu ft} \\ 16349 \text{ lb/cu ft} \\ \hline 12840500 \text{ lb} \end{array}$$

~~6420 tons~~
~~tunnel muck~~

7 x 7 section average width 7.01 ft

$$\begin{array}{r} 2244 \times 49 = 109956 \text{ cu ft} \\ 16349 \text{ lb/cu ft} \\ \hline 17976700 \\ 2000 \text{ } \left\{ \begin{array}{l} 17976700 \\ \hline 8988 \text{ tons} \end{array} \right. \end{array}$$

	Weight gm	Avg.	
10	1.5252	12.75	
70	2.0523	478	1289
80	3.0887	811	1658
90	5.0927	847	1809
100	6.1058	862	2700
110	0.1902	1738	5268
120	5.3262	3530	9448
130	0.5476	5918	14122
140	0.8927	8204	19477
150	1.2335	11273	23274
160	1.3131	12001	24319
170	1.3478	12318	23474
180	1.2207	11156	19405
190	0.9026	8249	12212
200	0.4336	3963	

158,455 x 5 = 792,275 $\frac{\text{cft}}{\text{ton}}$

39,614 tons

less 359 mined

less 678 waste dumped on dump

38,577 tons

@ \$4372

\$168,659

38,577 tons

less 8988 tons for much taken from Shorpy Tunnel
29,589 tons (7 x 7 x 22 44)

Average of
Samples #1, #2, #6, #9

\$4971

Oct 30 Metal Prices

Ag 135

Ag 204

Pb 1356

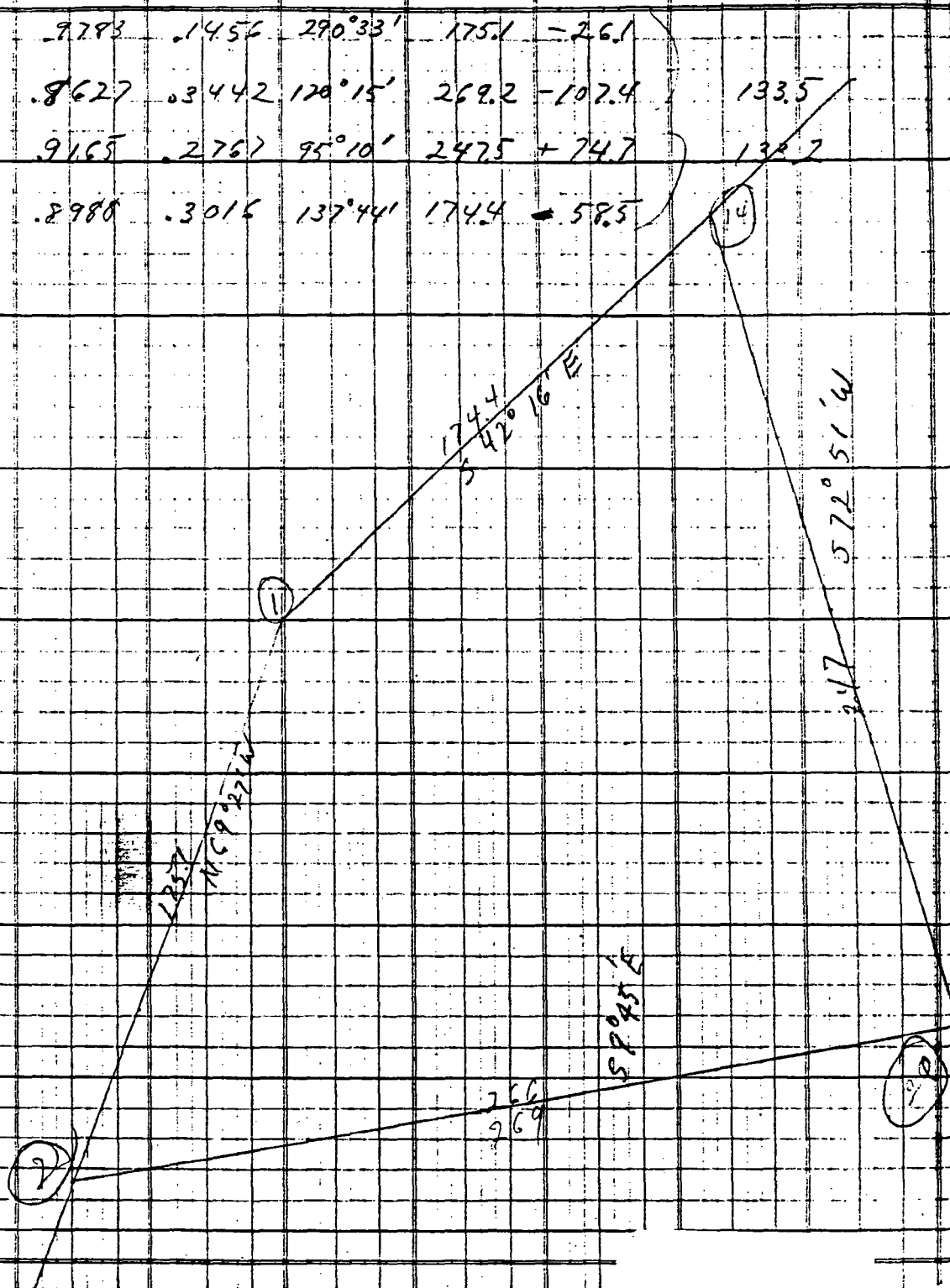
Zn 1250

Cu 2450

29,589 tons @ \$4971

\$147,087

			Az	H.D	V.D	
H-B	179	.9783	.1456	290°33'	175.1	-26.1
BC	312	.8627	.3442	120°15'	269.2	-107.4
CD	220	.9165	.2767	95°10'	247.5	+74.7
AD	124	.8980	.3016	137°44'	174.4	-58.5



				H_n	V_n	H_D	V_D	Azimuth
(2)								
1	3	20	-5°22'	10700	0064	90.0	-0.6	0°50'
	4	87	-0°57'	9997	0166	62.0	-1.1	351°45'
	5	82	-4°01'	9954	0577	91.5	-6.4	328°00'
	6	53	-3°27'	9764	0601	52.8	-3.2	330°30'
	7	74	-4°49'	9738	0727	73.5	-6.2	290°30'
	8	42	-0°12'	10000	0035	42.0	-0.1	342°30'
	9	38	-2°50'	9976	0474	37.9	-1.9	284°30'
	10	23	-1°13'	9996	0212	23.0	-0.5	287°00'
	11	17	-2°14'	9983	0270	17.0	-0.7	164°15'
	12	27	-0°30'	9999	0227	27.0	+0.2	24°00'
	13					47.2		
(14)								
2	15	104	+9°26'	9731	1617	141.2	+16.8	110°45'
	16	120	+2°13'	9796	1415	117.6	+12.0	82°30'
	17	164	+3°43'	9954	0547	103.6	+6.7	75°45'
	18	88	-2°14'	9985	0270	87.9	-3.4	70°30'
	19	70	-6°41'	9865	1155	69.1	-8.1	92°15'
	20	103	+2°06'	9987	0366	102.9	+3.8	94°30'
	21	86	+3°55'	9954	0581	85.6	+5.9	103°00'
	22	79	-0°05'	10000	0015	79.0	-0.1	120°45'
	23	98	-0°21'	9999	0090	98.0	-0.9	125°45'
	24	107	-11°35'	9526	1270	102.7	-21.1	141°30'
	25	67	-17°14'	9122	2830	61.1	-19.0	137°00'
	26	53	-27°10'	7915	4062	41.9	-21.5	120°30'
	27	110	-27°20'	7892	4079	86.8	-44.9	168°15'
	28	167	-23°22'	8416	3651	140.5	-61.0	164°30'
(29)								
	30	254	+126°29'	7988	4009	202.9	+101.8	14°30'
	31	246	+27°38'	7849	4109	193.1	+106.1	18°45'
	32	243	+27°30'	7868	4096	191.2	+99.5	23°15'
	33	285	+28°42'	7694	4212	180.8	+99.0	34°15'
	34	231	+27°24'	7882	4086	182.1	+94.4	42°15'
	35	200	+19°32'	8873	3163	177.5	+63.3	58°00'
	36	174	+12°02'	9565	2039	166.4	+35.5	67°30'
	37	127	+2°25'	9982	0421	126.8	+5.3	82°45'
	38	93	+2°52'	9974	0511	92.8	+4.8	77°45'
	39	57	+0°58'	9997	0167	57.0	+1.0	66°30'
	40	26	+15°19'	9303	2548	20.7	+19.4	35°45'
	41	125	+20°49'	8737	3322	169.2	+41.5	12°00'
	42	165	+21°49'	8619	3450	142.2	+56.9	10°15'
	43	40	+21°11'	8694	3370	34.8	+13.5	284°30'
	44	45	+7°33'	9828	1303	44.2	+5.9	328°15'

1	200.0		H.D		Est	Rep
2	173.9		Cor	Sim		
3	199.4				1509.24	1509.0
4	198.9	N 69° 22' W	35102	93637	+ 11.5	- 164.0
5	193.6	S 175° 1'			1061.5	836.0
6	196.8	S 9° 45' E	98556	16935	- 2653	+ 45.6
7	193.8	269.2			796.20	881.6
8	199.9					
9	198.1					
10	199.5	S 42° 16' E	24002	67258	- 129.1	+ 117.3
11	199.3	174.4			870.9	1117.3
12	200.2	S 22° 31' W	29487	95554	- 730	- 236.5
13	1	247.5			797.9	880.8
14	141.5				178	0.8
15	190.7					
16	190.9					
17	180.6					
18	170.5				A 1000.0	1000.0
19	165.8				D 870.4	1186.9
20	172.7				C 797.1	881.2
21	179.8					
22	173.8				A 1000.0	1000.0
23	173.0				B 1061.2	835.2
24	152.8				C 797.1	881.2
25	154.9					
26	152.4					
27	129.0					
28	112.9					
29	66.5					
30	68.3					
31	62.6					
32	66.0					
33	105.5					
34	100.9					
35	129.8					
36	102.0					
37	21.8					
38	21.3					
39	62.5					
40	85.9					
41	108.0					
42	123.4					
43	128.0					
44	147.4					

7.8
SILVER BELT INDUSTRIES
Operating Reports
Semi-Monthly Operating Reports
1953

Dec 1953

Lot 138-145

1	2	3	4	5	6	7
Or.	Gold	Silver	Lead	Copper	Zinc	
Mid. J	22.575	2544.525	5113.715	1177.375	1554.45	
1075 tons	0.021%	2.367%	4.757%	0.165%	1.446%	
1						
2	16.601	1.99	482.3	16.143	38.2	
3	11.433	1.09	324.7	11.986	25.2	
4	10.799	1.13	307.2	10.972	17.9	
5	10.9135	1.09	300.9	10.874	18.1	182.65
6	11.181	1.06	312.8	11.494	15.7	4.969
7	10.886	1.03	296.1	11.300	15.2	.605
8	11.7335	1.00	342.0	11.945	19.9	.33
9	11.0945	0.72	308.4	10.762	16.6	
10						
11	94.6415	9.11	2674.4	75.476 79.476	166.2	
12						
13		0.096%	28.258%	30.441%	0.87%	
14						
15	4 months					
16	465.3895	36.91	14646.0	55200.1	7654	
17	Cum					
18	0.122%	31.47%	59.305%	0.822%		
19	\$22.28	\$156.37	\$391.41	\$10.53		\$580.59
20						
21	5694	149.53	16581.686	32487.761	1108.579	9859.479
22	Mid. H. reds					
23	0.026%	2.912%	5.706%	0.195%	1.732%	
24						
25	\$4.75	\$14.47	\$37.66	\$2.36		\$59.24
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

Sept 1953

Lot 115-120

1	2	3	4	5	6	7
Or. Milled Tons	Au	Ag	Pb	Cu	Zn	
17782	0.029	2.256	5.431	0.254	1.907	1
1748	50.692	4817.488	9493.388	443.992	3333.436	2
19.223	2.98	596.9	23894	365		4
11.252	1.74	371.9	14346	191		5
20.996	2.41	719.1	27841	294		6
19.0565	3.24	604.1	22677	248		7
19.435	3.01	649.1	25188	272		8
21.1895	2.97	736.3	27250	403		9
111.152	16.35	3677.4	141196	1773		11
Conc. Assay	0.147%	33.084%	63.51%	0.80%		13
Oct 1953 Lot 121-127						
14.966	0.028	3.298	6.388	0.197	1.758	16
	41.888	4933.808	9536.448	294.712	2629.968	17
19.36	2.23	650.5	23716	368		18
16.6205	2.24	571.7	20643	299		19
20.0315	2.60	646.0	24038	280		20
19.371	2.71	603.4	23028	194		21
18.491	2.50	587.1	20821	259		22
22.7465	2.62	742.7	28228	332		23
9.376	1.05	303.8	6754	182		24
			12020			25
125.9965	15.85	4105.2	145288	1914		26
			152494	6051%		27
Conc. Assay	0.126%	32.582%	58.89%	0.760%		28
Nov. Lot 128-137						
1375	34.324	4285.875	8324.25	192.5		29
1375	0.025%	3.117%	6.054%	0.140%	1.703%	30
22.061	1.88	668.41	28812	243	2341.625	31
11.307	0.96	360.1	14518	136		32
11.23	0.95	340.8	14195	135		33
11.5475	1.44	348.0	13538	217		34
11.156	1.28	263.1	14010	187		35
11.4845	1.26	350.9	13356	195		36
11.0765	1.83	363.3	12572	199		37
12.517	1.81	408.7	14833	238		38
11.3895	1.31	386.7	14077	319		39
19.8305	2.88	699.0	22924	436		40
133.585	15.6	4189.0	162835	2305		
	0.117%	31.355%	60.941%	0.863%		

(FILE)

OPERATING REPORT: JANUARY, 1951

ORE MINED:

PRODUCTION:

	Ore	Waste	Advance
St 600, Carb 8 E	529 Tons		37.7 Fathoms
St 940, But 12 W	1386 Tons		67.7 Fathoms
St 850, Ida 14 W	586 Tons		42.3 Fathoms
St Ida Sub 10 W	172 Tons*		10.3 Fathoms
	<u>2501 Tons**</u>		

DEVELOPMENT:

Drifts:

Drift, Carb 8 E	208 Tons	67.1 Ft.
Drift, Ida Sub 10 W	***	33.0 Ft.
Drift, But 12 W	30 Tons	12.1 Ft.
	<u>238 Tons</u>	

Backstopes:

St 1100, But 14 W	732 Tons***	34.1 Fathoms
	<u>732 Tons</u>	

Total Ore mined 3441 Tons****

*Includes ore mined in Drift, Ida Sub 10 W (Tungsten ore)
 **Does not include Ore mined Drift, Ida Sub 10 W
 ***Ore included in quantity given for St. Ida Sub 10 W.
 ****Total quantity including the unmeasured quantity on 31 Dec.
 1952 report
 *****Total does not include tungsten ore production

ORE INVENTORY:

	Inventory	Assay Value per Ton
St 610, Ida 12 W	503	\$ 5.773
St 850, Ida 14 W	413	\$ 4.068
St 400, Ida 11 W	433	\$ 6.856
St 300, Ida 11 W	143	\$ 5.251
St 310, Ida 12 W	257	\$ 4.677
St 1, But 11 W	315	\$ 6.990
St 940, But 12 W	1521	\$ 6.693
St 990, But 13 W	110	\$ 6.831
Old Carbonere stopes	10006	\$11.755
St 140, Carb 8 E	235	\$ 7.151
St 600, Carb 8 E	2178	\$43.007
Carbonere Dump	25507	\$ 5.015
	<u>41621 Tons</u>	
	@ \$8.736/Ton	Gross Value \$363,346

TUNGSTEN ORE INVENTORY:

	Tons	Value per ton
Coarse ore bin	60	\$37.70
Rs 400, Ida 14 E	112	\$32.50
Rs 165, Ida 10, 11, 12, & 13, W	248	\$37.70
Sacked ore	0.5	\$325.00
Broken ore on 6 Level	25	\$32.50
	<u>445.5 Tons</u>	
		Gross Value \$15,415.00
Tungsten Concentrates:	900 lbs @ 63.5% W03	
		Gross Value \$1,857.00

ORE TRAMMED: CAR FACTOR: 1.4051800 tons per car ASSAY FACTOR: 81.73130%

	Rs 175	St 1	St 865	St 990
	But 14 W	But 14 W	But 14 W	But 13 W Trf
Tons	474	96	119	1374
Per Cent	11.61	2.35	2.92	33.67
Value	\$ 5.169	\$ 2.897	\$ 4.369	\$ 8.343
	St 1100	St 250	Rs 165	St 850
	But 14 W	Ida 14 W	Ida 14 W	Ida 14 W
Tons	732	742	55	173
Per Cent	17.94	18.18	1.35	4.24
Value	\$ 3.112	\$ 2.908	\$ 5.729	\$ 2.828
	Outside ore raise			
	Carbonero Ore			
Tons	316			
Per Cent	7.74			
Value	\$ 12.335			
	Total ore trammed: 4081 tons			
	Tons per day: 151.14 tons			

WASHING PLANT:

Tons of waste sorted 880 tons
P Per cent of ore trammed 21.56%

ORE MILLED:

	Tonnage		Period	Assay Values		
	Period	To Date		To Date	Gross	Net
Bell	2953	2953	Gross	Net	Gross	Net
Carb	248	248	\$20041	\$13900	\$20041	\$13900
Total	3201	3201	3408	2317	3408	2317
			\$23849	\$16217	\$23849	\$16217
Metals:	Assays:					
	Silver Bell		Carbonero		Combined	
Au \$35.00	0.041	\$1.428	0.015	\$0.528	0.039	\$1.356
Ag \$ 0.90	3.548	3.193	3.316	2.984	3.530	3.177
Pb \$ 0.14	0.344	0.963	3.093	8.662	0.557	1.560
Cu \$ 0.245	0.273	1.338	0.324	1.588	0.277	1.357
Gross		\$6.922		\$13.740		\$7.453
Net (68%)		\$4.571		\$ 9.343		\$5.058

MILL OPERATION:

Ball mill grinding time 558.25
Efficiency 75.0336%

CONCENTRATES:

Shipments:

Truck Lot No. 70	10.951 dry tons	Gross Value	\$2503
Shipped Jan 5, 1953		Net Value	2034.94
Truck Lot No. 71	12.5555 dry tons	Gross Value	\$2328
Shipped Jan 12, 1953		Net Value	1843.29
Truck Lot No. 72	9.9765 dry tons	Gross Value	\$1697
Shipped Jan 15, 1953		Net Value	1326.38
Truck Lot No. 73	11.2545 dry tons	Gross Value	\$2935
Shipped Jan 19, 1953		Net Value	2383.04
Truck Lot No. 74	10.010 dry tons	Gross Value	\$2812
Shipped Jan 22, 1953		Net Value	2299.25
Truck Lot No. 75*	11.25 dry tons	Gross Value	\$3401
Shipped Jan 26, 1953		Net Value	2823.75
Truck Lot No. 76*	11.88 dry tons	Gross Value	\$3199
Shipped 30 Jan, 1953		Net Value	2613.60

* Estimated by mine assays and weights.

Inventory:

Truck Lot No. 77	7.03 dry tons	Gross Value	\$1935
		Net Value	1503.24

Total Concentrates Produced:

Shipments	77.8775 dry tons	\$18876	\$15328.25
Plus 31 Jan. Inv.	7.03	1935	1503.24
	84.9075 dry tons	\$20811	\$16832.49
Less 31 Dec. Inv	4.06	1040	854.32
Production	80.8475 dry tons	\$19771	\$15977.97

PAY ROLL FOR PERIOD:

	Bell	Carbonero	Total
Underground	28	5	33
Surface	5	1	6
Mill	13		13
Tailings Pond	2		2
Ophir Corp			5
Assaying			1
Engineering			2
Office			2
Supervision	3	1	4
Totals	51	7	58

Gross Payroll for January, 1953 \$28232.46 \$21.60


H. H. SMITH
 General Manager

OPERATING REPORTFEBRUARY 1953ORE MINED:PRODUCTION

	Ore	Waste	Advance
St 300 Ida 13 W	389		32.4 fathoms
St 850 Ida 14 W	841		51.9 fathoms
St 1 But 11 W	203		14.5 fathoms
St 940 But 12 W	909		42.0 fathoms
St 600 Carb 8 E	698		47.1 fathoms
	<u>3,040 tons</u>		

DEVELOPMENT:Stopes

St 800 & 900 Carb 8 E	176		11.8 fathoms
St 1100 But 14 W	150		3.7 fathoms

Drifts

Drift But 12 W	42		12.1 Feet
Drift Carb 8 E	280	33	58.2 feet
	<u>648 tons</u>	<u>33 tons</u>	

Total Ore Mined	3,688 tons
Waste Mined	33 tons.
	<u>3,721 tons</u>

ORE INVENTORY:

	Tons	Value Per Ton
St 610 Ida 12 W	503	\$5.215
St 310 Ida 12 W	257	4.429
St 300 Ida 13 W	428	4.464
St 400 Ida 13 E	330	6.421
St 850 Ida 14 W	830	2.705
St 1 But 11 W	414	5.184
St 940 But 12 W	1971	5.252
Old Carbonero Stopes	10006	7.476
Carbonero Dump	25507	3.741
St 140 Carb 8 E	96	5.857
St 600 Carb 8 E	2380	26.985
	<u>42722 tons</u>	
	@ \$6.03 per ton	
	Gross Value \$257,547	

TUNGSTEN ORE INVENTORY

Coarse Ore Bin	86	\$37.70
Rs 400 Ida 14 E	112	\$32.50
Rs 165 Ida 14 W	222	\$37.70
Sacked Ore	0.5	\$325.00
Broken Ore on 6-level	25	\$32.50
	<u>445.5 tons</u>	
	Gross Value \$15,415	
 Tungsten Concentrate	 900 lbs. @ 63.5% WO ₃	
	Gross Value \$1,857.00	

ORE TRAMMED: Car Factor 1.5303995 tons/car Assay Factor 69.10282%

	St 250 Trf	Rs 165 Trf	St 850	St 1 Trf
	Ida 14 E	Ida 14 W	Ida 14 W	But 14 W
Tons	104	103	424	104
Per Cent	3.22%	3.19%	13.14%	3.22%
Value	\$5.42	\$2.54	\$2.25	\$4.83
	St 865 Trf	St 990	St 1100	Carbonero
	But 13 W	But 13 W	But 14 W	Ore
Tons	116	1134	150	1091
Per Cent	3.60%	35.16%	4.65%	33.82%
Value	\$1.63	\$4.96	\$4.34	\$8.70

Total Ore Trammed: 3226 tons
Daily Average: 134.6 tons/day

WASHING PLANT:

Tons of waste sorted: 583 tons
Per Cent of trammed ore: 18.07%

ORE MILLED:

	Tonnage		Assay Values		To Date	
	Period	To Date	Period	Net	Gross	Net
Bell	1749	4702	\$ 9,807	\$ 6,669	\$30,248	\$20,569
Carb	894	1142	\$ 8,432	\$ 5,734	\$11,840	\$ 8,051
Totals	2643	5844	\$18,239	\$12,403	\$42,088	\$28,620

	Assays		Silver Bell		Carbonero		Combined	
	Assay	Value	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.046	\$1.610	0.0224	\$0.784	0.038	\$1.330		
Ag 90¢	2.839	2.555	2.390	2.151	2.687	2.418		
Pb 13.5¢	0.225	0.608	2.016	5.443	0.831	2.244		
Cu 25.10¢	0.166	0.834	0.210	1.054	0.181	0.909		
Gross		\$5.607		\$9.432		\$6.901		
Net (68%)		\$3.813		\$6.414		\$4.693		

MILL OPERATION:

Ball Mill Grinding Time: 522.25 Hours. 77.72% Efficiency

CONCENTRATES:

We shipped Lots No. 77, 78, 79, 80, 81, and 82 in February.

	Dry Tons	Gross Value	Net Value
Shipments	48.8785	\$16,622	\$13,504.16
Plus Feb. 28 Inv.	4.01	967	878
	52.8885	\$17,589	\$14,382.16
Less Jan. 31 Inv.	7.03	1,935	1,503.24
February Production	45.8585	\$15,654	\$12,878.92

PAYROLL FOR FEBRUARY

	Bell	Carb	Total
Underground	22	9	31
Surface	7	1	8
Crushing Plant	3		3
Mill	5		5
Tailing Pond	3		3
Ophir, Corp.			4
Assaying			1
Engineering			2
Office			2
Supervision	3	1	4
	43	11	53

Gross Payroll

\$23,541.12

SILVER BELL MINES COMPANY

A. A. Smith
General Superintendent

OPERATING REPORT

MARCH 1953

ORE MINED:PRODUCTION

St 850 Ida 14 W
 St 1 But 11 W
 St 940 But 12 W
 St 600 Carb 8 E
 St 800 Carb 8 E

ORE

409
 446
 918
 525
 223
 2521 tons

ADVANCE

27.5 fathoms
 30.0 fathoms
 63.1 fathoms
 35.0 fathoms
 20.7 fathoms

DEVELOPMENTStopes

St 1170 But 12 W
 St 900 Carb 8 E

108
 877
 985 tons

6.1 fathoms
 48.1 fathoms

Total Ore Mined

3506 tons

ORE INVENTORY:

St 610 Ida 12 W
 St 310 Ida 12 W
 St 400 Ida 13 E
 St 300 Ida 13 W
 St 850 Ida 14 W
 St 1 But 11 W
 St 940 But 12 W
 Old Carb Stopes
 Carbonero Dump
 St 140 Carb 8 E
 St 600 Carb 8 E
 St 800 Carb 8 E

Tons
 503
 257
 16
 428
 730
 708
 2374
 9998
 25507
 93
 2677
 158

Value
 Per Ton
 \$5.272
 4.542
 6.554
 4.558
 2.802
 5.385
 4.599
 7.790
 3.770
 6.001
 25.253
 7.684

43449 tons @ \$6.124 per ton
 \$266,070 Gross Value

TUNGSTEN ORE INVENTORY

Coarse Ore Bin
 Rs 400 Ida 14 E
 Rs 165 Ida 14 W
 Sacked Ore
 Broken Ore on 6-level

Tons
 65
 112
 168
 0.5
 25

Value
 Per Ton
 \$37.70
 32.50
 37.70
 325.00
 32.50

370.5 tons
 \$13,399 Gross Value

Tungsten Concentrate
 WO₃ Price \$65/unit

300 lbs. @ 68.6% WO₃
 \$689 Gross Value

TUNGSTEN SHIPMENT

Mine Lot # 1000 lbs. @ 65.60% WO₃ Gross Value \$2132

ORE TRAMMED: Car Factor 1.4542056 tons per car; Assay Factor 0.6921098

	St 250 Trf	St 850	St 1	
	Ida 14 E	Ida 14 W	But 11 W	
Tons	314	509	152	
Per Cent	11.30%	18.31%	5.47%	
Value	\$1.748	\$2.874	\$5.553	
	St 940	Carbonerp		<u>Tungsten Ore</u>
	But 12 W	Ore		Rs 165 Trf
Tons	623	1181		Ida 14 W
Per Cent	22.42%	42.50%		54
Value	\$3.197	\$10.706		\$3.25 (W ₃ only)

Total Sulfide Ore Trammed: 2779 tons
 Daily Average: 106.9 tons/day
 Total Tungsten Ore Trammed: 54 tons

WASHING PLANT:

Tons of waste sorted: 445 tons
 Per cent of trammed ore: 16.01%

ORE MILLED:

	A Assay Values					
	Tonnage		Period		To Date	
	Period	To Date	Gross	Net	Gross	Net
Bell	1342	6044	\$ 6,074	\$ 4,130	\$36,322	\$24,699
Carb	992	2134	\$11,417	\$ 7,764	\$23,257	\$15,815
	2334	8178	\$17,491	\$11,894	\$59,579	\$40,514

	<u>Assays</u>					
	<u>Silver Bell</u>		<u>Carbonero</u>		<u>Combined</u>	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.029	\$1.015	0.015	\$0.525	0.023	\$0.805
Ag 90%	2.433	2.198	2.861	2.575	2.615	2.354
Pb 13.396%	0.220	0.589	2.625	7.033	1.242	3.327
Cu 29.290%	0.125	0.712	0.235	1.376	0.172	1.008
Gross		\$4.526		\$11.509		\$7.494
Net (68%)		\$3.077		\$ 7.827		\$5.096

MILL OPERATION:

Ball Mill Grinding Time: 505.50 Hrs. 67.94% Efficiency

CONCENTRATES:

We Shipped Lots Nos. 83, 84, 85, 86, and 87 in March.

	Dry Tons	Gross Value	Net Value
Shipments	59.785	\$12,699	\$ 9,924.51
Plus Apr. 1 Inv.	8.90	2,274	1,764
	<u>68.685</u>	<u>\$14,973</u>	<u>\$11,688.51</u>
Less Mar. 1 Inv.	4.01	967	878
	<u>64.675</u>	<u>\$14,006</u>	<u>\$10,810.51</u>

PAYROLL FOR MARCH:

	Bell	Carb	Total	
Underground	12	12	24	
Surface	7	2	9	
Crushing Plant	2		2	<u>Gross Payroll</u>
Mill	6		6	
Tailing Pond	4		4	\$22,206.94
Ophir, Corp.			5	
Assaying			1	
Engineering			2	
Office			2	
Supervision	3	1	4	
	<u>34</u>	<u>15</u>	<u>59</u>	

SILVER BELL MINES COMPANY

H. L. Smith
General Superintendent

(file)

OPERATING REPORT APRIL 1953

ORE MINED:

<u>PRODUCTION</u>	<u>ORE</u>	<u>ADVANCE</u>
St 850 Ida 14 W	980 tons	59.1 fathoms
St 1 But 11 W	558	37.4 fathoms
St 940 But 12 W	614	41.6 fathoms
St 600 Carb 8 E	607	48.3 fathoms
St 800 Carb 8 E	310	27.8 fathoms
	3069 tons	

DE DEVELOPMENT

<u>Stopes</u>	<u>Ore</u>	<u>Waste</u>	<u>Advance</u>
St 1170 But 12 W	40		2.7 fathoms
St 900 Carb 8 E	14	39	
<u>Raises</u>			
St 850 Ida 14 W	169		33.5 feet
St 940 But 12 W	79		39.0 feet
<u>Drifts</u>			
Drift Carb 8 E	347	22	49.0 feet
	649 tons	61 tons	46.5 feet of slabbing
Total Ore Mined	3718 tons		

ORE INVENTORY:

	<u>tons</u>	<u>Value Per Ton</u>
St 610 Ida 12 W	503	\$ 5.203
St 310 Ida 12 W	257	4.522
St 400 Ida 13 E	6	6.522
St 300 Ida 13 W	428	4.540
St 850 Ida 14 W	1147	2.248
St 1 But 11 W	920	4.234
St 940 But 12 W	2134	4.083
Old Carbonero Stope Fill	9998	7.685
Carbonero Dump	25507	3.642
St 140 Carb 8 E	93	5.866
St 600 Carb 8 E	2976	24.509
St 800 Carb 8 E	234	11.081
	44203 tons	
	@ \$6.035 per ton	
	\$266,756 gross value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50; \$3640 Gross Value

TUNGSTEN ORE TRAMMED TO MILL

Rs 165 Ida 14 W Trf 235 tons @ 0.305% WO₃

TUNGSTEN CONCENTRATE ON HAND

1000 lbs. @ 57.85% WO₃ \$1678 Gross Value

ORE TRAMMED: Car Factor S.B. Mine 1.2728292 tons/car
 Carb. Mine 1.5233333 tons/car
 Assay Factor 0.6846163

	St 250 Trf	St 850	St 1	St 940	Drift
	Ida 14 E	Ida 14 W	But 11 W	But 12 W	Carb 8 E
Tons	10	732	346	933	347
Per Cent	0.34%	24.94%	11.79%	31.79%	11.82%
Value	\$8.428	\$1.567	\$2.901	\$3.334	\$9.266

	St 900	St 800	St 600	Ditch
	Carb 8 E	Carb 8 E	Carb 8 E	West Carb.
Tons	14	234	308	11
Per Cent	0.48%	7.97%	10.49%	0.38%
Value	\$7.193	\$12.185	\$15.178	\$13.528

Total Ore Trammed 2935 tons
 Daily Average 112.9 tons/day

WASHING PLANT:

Tons of waste sorted: 326 tons
 Per Cent of trammed ore: 11.10%

ORE MILLED:

	Tonnage		Assay Values		To Date	
	Period	To Date	Gross	Net	Gross	Net
Bell	1797	7441	\$5,386	\$4,342	\$42,708	\$29,041
Carb	812	2946	\$9,949	\$6,765	\$33,206	\$22,580
	2609	10787	\$15,335	\$11,107	\$75,914	\$51,621

	Assays		Silver Bell		Carbonero		Combined	
	Assay	Value	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.027	\$0.945	0.023	\$0.805	0.026	\$0.910		
Ag 90%	1.604	1.444	3.912	3.521	2.322	2.090		
Pb 12.656%	0.194	0.489	2.484	6.288	0.903	2.286		
Cu 29.901%	0.113	0.676	0.274	1.639	0.163	0.975		
Gross		\$3.554		\$12.253		\$6.261		
Net (68%)		\$2.417		\$8.332		\$4.257		

MILL OPERATION:

Ball Mill Grinding Time: 443.5 hrs. 61.60% Efficiency

CONCENTRATES:

We shipped Lots Nos. 88, 89, 90, 91, 92, 93, and 94 in April.

	Dry tons	Gross Value	Net Value
Shipments	76.6895	\$14,536	\$11,201.76
Plus May 1, Inv.	6.83	\$ 1,474	\$ 1,178.00
	83.5195	\$16,010	\$12,379.76
Less Apr. 1, Inv.	8.90	\$ 2,274	\$ 1,764.00
April Production	74.6195	\$13,736	\$10,615.76

PAYROLL FOR APRIL:

	Bell	Carb	Total	
Underground	14	11	25	
Surface	6	3	9	<u>Gross Payroll</u>
Crushing Plant	2		2	
Tungsten Mill	4		4	\$22,471.58
Flotation Mill	4		4	
Tailing Pond	3		3	
Ophir, Corp.			4	
Assaying			1	
Engineering			1	
Office			2	
Supervision	3	1	4	
	36	15	59	

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

(file)

OPERATING REPORT MAY 1953

ORE MINED:

<u>PRODUCTION</u>	<u>ORE TONS</u>	<u>WASTE TONS</u>	<u>ADVANCE</u>
St 600 Carb 8 E	718		49.5 fathoms
St 800 Carb 8 E	486		33.5 fathoms
St 900 Carb 8 E	786		66.1 fathoms
	1990 tons		

DEVELOPMENT

Drift Carb 8 E	89	98	54.8 feet
Drift Lookout 14 E		112	30.2 feet
	89 tons	210 tons	

Total Ore Mined 2079 tons

ORE INVENTORY:

	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$5.204
St 310 Ida 12 W	257	4.518
St 300 Ida 13 W	428	4.536
St 850 Ida 14 W	156	2.248
St 1 But 11 W	592	4.232
St 940 But 12 W	1747	4.078
Old Carb Stope Fill	9998	7.675
Carbonero Dump	25507	3.647
St 140 Carb 8 E	80	5.866
St 600 Carb 8 E	3425	23.700
St 800 Carb 8 E	424	11.641
St 900 Carb 8 E	496	7.564
	43,713 tons	
	@\$6.319 per tons	
	Gross Value \$276,213	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @\$32.50; \$3640 Gross Value

TUNGSTEN ORE TRAMMED TO MILL:

Rs 165 Ida 14 W Trf 184 tons @\$0.235% WO₃

TUNGSTEN CONCENTRATES ON HAND:

800 lbs. @57.50% WO₃; \$1334 Gross Value

TUNGSTEN SHIPMENTS:

May 6, 1953 1400 lbs. @57.85% WO₃; \$2348 Gross Value

ORE TRAMMED: Car factor S. B. Mine 1.1825075 tons/car
 Carb. Mine 1.1571946 tons/car
 Assay factor 0.7372056

	St 250 Trf	St 850	St 1	St 940	Drift
	Ida 14 E	Ida 14 W	But 11 W	But 12 W	Carb 8 E
Tons	104	991	228	387	89
Per Cent	3.90%	37.16%	8.55%	14.51%	3.34%
Value	\$3.508	\$3.259	\$4.233	\$2.390	\$9.282

	St 900	St 800	St 600	St 140
	Carb 8 E	Carb 8 E	Carb 8 E	Carb 8 E
Tons	290	296	269	13
Per Cent	10.87%	11.10%	10.08%	0.49%
Value	\$10.315	\$12.122	\$12.875	\$6.330

Total Ore trammed 2667 tons
 Daily Average 102.6 tons/day

WASHING PLANT:

Tons of waste sorted: 328 tons
 Per Cent of trammed ore: 12.28%

ORE MILLED:

	Tonnage		Assay Values			
	Period	To Date	Period		To Date	
			Gross	Net	Gross	Net
Bell	1500	9341	\$ 5,719	\$ 3,889	\$48,427	\$32,930
Carb	839	3785	\$10,717	\$ 7,288	\$43,923	\$29,868
	2339	13126	\$16,436	\$11,177	\$92,350	\$62,798

	Assays					
	Silver Bell		Carbonero		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.017	\$0.595	0.019	\$0.665	0.018	\$0.630
Ag 90%	1.980	1.782	3.446	3.101	2.506	2.255
Pb 12.698%	0.329	0.837	3.175	8.063	1.346	3.418
Cu 29.674%	0.101	0.599	0.159	0.944	0.122	0.724
Gross		\$3.813		\$12.773		\$7.027
Net (68%)		\$2.593		\$ 8.686		\$4.778

MILL OPERATION:

Ball Mill Grinding Time: 500.75 hrs. 67.31% Efficiency

CONCENTRATES:

We shipped Lots Nos. 95, 96, 97, 98, 99, and 100 in May.

	Dry Tons	Gross Value	Net Value
Shipments	77.4545	\$14,503	\$11,237.77
Plus June 1 Inv.	26.69	\$ 4,221	\$ 3,340.00
	104.1445	\$18,724	\$14,577.77
Less May 1 Inv.	6.83	\$ 1,474	\$ 1,178.00
May Production	97.3145	\$17,250	\$13,399.77

PAYROLL FOR MAY:

	Bell	Carb	Total	
Underground	10	12	22	
Surface	5	2	7	<u>Gross Payroll</u>
Crushing Plant	2		2	
Tungsten Mill	3		3	\$18,537.11
Flotation Mill	3		3	
Tailing Pond	3		3	
Ophir, Corp.			2	
Assaying			1	
Engineering			1	
Office			2	
Supervision	3	1	4	
	29	15	50	

SILVER BELL MINES COMPANY

General Superintendent

OPERATING REPORTJUNE 1953

file

ORE MINED:

<u>PRODUCTION</u>	<u>Ore</u>	<u>Waste</u>	<u>Advance</u>
St 600 Carb 8 E	875		60.4 fathoms
St 800 Carb 8 E	463		34.0 fathoms
St 900 Carb 8 E	1458		105.7 fathoms
	<u>2796</u>		

DEVELOPMENT

Drift Carb 8 E	262	134	112.2 feet
Drift Lookout 14 E	103	6	23.1 feet
	<u>365</u>	<u>140</u>	

Total Ore Mined 3161 tons

ORE INVENTORY:

	<u>Tons</u>	<u>Value per ton</u>
St 610 Ida 12 W	503	\$5.280
St 310 Ida 12 W	257	4.554
St 300 Ida 13 W	428	4.568
St 850 Ida 14 W	124	2.288
St 1 But 12 W	656	4.279
St 940 But 12 W	1040	4.112
Old Carb Stope Fill	9998	7.824
Carbonero Dump	25507	3.777
St 140 Carb 8 E	80	6.019
St 600 Carb 8 E	4080	23.931
St 800 Carb 8 E	657	11.294
St 900 Carb 8 E	1350	12.116
	<u>44,680 tons</u>	
	@ \$6.929 per ton	
	\$309,609 gross value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

TUNGSTEN ORE TRAMMED TO MILL:Rs 165 Ida 14 W Trf 87 tons @ 0.014% WO₃TUNGSTEN SHIPMENTS:June 8, 1953 1041 lbs. @ 57.50% WO₃; \$1719.18 Gross Value

ORE TRAMMED: Car Factor S. B. Mine 1.0215897 tons/car
 Carb Mine 1.0595813 tons/car
 Assay factor 0.8739313

	St 250 Trf	St 850	St 1	St 940	Drift
	Ida 14 E	Ida 14 W	But 11 W	But 12 W	Lookout 14 E
Tons	43	32	36	707	103
Per Cent	1.92%	1.43%	1.61%	31.61%	4.60%
Value	\$2.954	\$2.672	\$5.360	\$2.739	\$1.372

	Drift	St 900	St 800	St 600
	Carb 8 E	Carb 8 E	Carb 8 E	Carb 8 E
Tons	262	604	230	220
Per Cent	11.71%	27.00%	10.28%	9.84%
Value	\$6.827	\$18.893	\$9.624	\$14.366

Total Ore Trammed 2237 tons
 Daily Average 86.04 tons/day

WASHING PLANT:

Tons of waste sorted: 155 tons
 Per Cent of Trammed ore: 6.94%

ORE MILLED:

	Tonnage		Assay Values			
			Period		To Date	
	Period	To Date	Gross	Net	Gross	Net
Bell	857	10,198	\$2,558	\$1,739	\$50,985	\$34,669
Carb	1,225	5,010	\$18,499	\$12,579	\$62,422	\$42,447
	2,082	15,208	\$21,057	\$14,318	\$113,407	\$77,116

	Assays					
	Silver Bell		Carbonero		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.012	\$0.420	0.027	\$0.945	0.021	\$0.735
Ag 90¢	1.188	1.069	3.587	3.228	2.598	2.338
Pb 13.406¢	0.425	1.140	3.480	9.331	2.221	5.955
Cu 29.6875¢	0.060	0.356	0.269	1.597	0.183	1.086
Gross		\$2.985		\$15.101		\$10.114
Net (60%)		\$2.030		\$10.269		\$6.878

MILL OPERATION:

Ball Mill Grinding time: 463.32 hrs. 64.35% Efficiency

CONCENTRATES:

We shipped Lots Nos. 101, 102, 103, 104, 105, 106, and 107 in June.

	Dry tons	Gross Value	Net Value
Shipments	136.2055	\$22,312	\$16,537.28
Plus July 1 Inv.	3.0000	\$ 557	\$ 429.60
	<u>139.2055</u>	<u>\$22,869</u>	<u>\$16,966.88</u>
Less June 1 Inv.	26.69	\$ 4,221	\$ 3,340.00
June Production	<u>112.5155</u>	<u>\$18,648</u>	<u>\$13,626.88</u>

PAYROLL FOR JUNE:

	Bell	Carb	Total	
Underground	8	14	22	
Surface	9	2	11	
Crushing Plant	2		2	<u>Gross Payroll</u>
Tungsten Mill	1		1	
Flotation Mill	3		3	\$18,777.40
Tailing Pond	2		2	
Ophir, Corp.			1	
Assaying			1	
Engineering			1	
Office			2	
Supervision	3	1	4	
	<u>28</u>	<u>17</u>	<u>50</u>	

SILVER BELL MINES COMPANY

L. J. Smith
General Superintendent

(file)

OPERATING REPORT JULY 1953

ORE MINED:

<u>PRODUCTION</u>	<u>Ore</u>	<u>Waste</u>	<u>Advance</u>
St 600 Carb 8 E	575		39.4 fathoms
St 800 Carb 8 E	184		12.5 fathoms
St 900 Carb 8 E	873		62.8 fathoms
	1632 tons		

DEVELOPMENT

Drift Carb 8 E	257	18	71.5 feet
Drift Lookout 14 E	113	21	30.7 feet
	370 tons	39 tons	

Total Ore Mined 2002 tons

<u>ORE INVENTORY:</u>	<u>Tons</u>	<u>Value Per Ton</u>
St 610 Ida 12 W	503	\$5.306
St 310 Ida 12 W	257	4.566
St 300 Ida 13 W	428	4.579
St 1 But 11 W	175	4.295
St 940 But 12 W	659	4.123
Old Carb Stope Fill	9998	7.875
Carbonere Dump	25507	3.822
St 140 Carb 8 E	80	6.072
St 600 Carb 8 E	4450	24.097
St 800 Carb 8 E	711	11.407
St 900 Carb 8 E	1834	12.353
	44,602 tons	
	@ \$7.264/ton	
	\$323,978 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

TUNGSTEN ORE TRAMMED TO MILL:

Rs 165 Ida 14 W Trf 186 tons @ 0.033% WO₃

TUNGSTEN CONCENTRATES ON HAND:

250 lbs. @ 55% WO₃ \$399 Gross Value

ORE TRAMMED: Car Factor S. B. Mine 0.9832487 Tons/car
Carb. Mine 1.2126081 tons/car
Assay Factor 0.6948608

	St 850	St 1	St 940	Drift
	Ida 14 W	But 11 W	But 12 W	Lookout 14 E
Tons	180	481	381	113
Per Cent	8.43%	22.52%	17.84%	5.29%
Value	\$2.078	\$5.126	\$2.669	\$2.691

	Drift	St 900	St 800	St 600
	Carb 8 E	Carb 8 E	Carb 8 E	Carb 8 E
Tons	257	389	130	205
Per Cent	12.03%	18.21%	6.08%	9.60%
Value	\$8.894	\$12.876	\$11.129	\$21.063

Total Ore Trammed 2136 tons
Daily Average 82.15 Tons/day

WASHING PLANT:

Tons of waste sorted; 199 tons.
Per Cent of Trammed ore: 9.30%

ORE MILLED:

	Tonnage		Assay Values			
	Period	To Date	Period		To Date	
			Gross	Net	Gross	Net
Bell	1,047	11,245	\$4,321	\$2,939	\$55,306	\$37,608
Carb	890	5,900	\$12,899	\$8,771	\$75,321	\$51,218
	1,937	17,145	\$17,220	\$11,710	\$130,627	\$88,826

	Assays		Carbonate		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.0216	\$0.756	0.029	\$1.015	0.025	\$0.875
Ag 90%	1.793	1.614	2.737	2.463	2.228	2.005
Pb 13.656	0.307	0.838	3.681	10.054	1.857	5.072
Cu 29.658	0.155	0.919	0.162	0.961	0.158	0.938
Gross		\$4.127		\$14.493		\$8.890
Net (28%)		\$2.806		\$9.855		\$6.045

MILL OPERATION:

Ball Mill Grinding Time: 405.67 hrs. 54.53% Efficiency

CONCENTRATES:

We shipped Lots Nos. 108, 109, 110, and 111 in July.

	Dry Tons	Gross Value	Net Value
Shipments	76.624	\$14,085	\$10,727.64
Plus Aug. 1 Inv.	12.650	\$2,533	\$1,975.00
	89.274	\$16,618	\$12,702.64
Less July 1 Inv.	3.000	\$557	\$429.60
July Production	86.274	\$16,061	\$12,273.04

PAYROLL FOR JULY:

	Bell	Carb	Total	
Underground	8	10	18	
Surface	6	2	8	<u>Gross Payroll</u>
Crushing Plant	2		2	
Tungsten Mill	2		2	\$15,741.87
Flotation Mill	4		4	
Tailing Pond	1		1	
Assaying			1	
Engineering			1	
Office			2	
Supervision	3	1	4	
	26	13	43	

SILVER BELL MINES COMPANY

H. J. Smith
General Superintendent

OPERATING REPORT

AUGUST 1953

P-1

ORE MINED

Production:

	Ore	Waste	Advance
St 600 Carb 8 E	110		8.3 Fathoms
St 800 Carb 8 E	265		19.9 Fathoms
St 900 Carb 8 E	702		54.2 Fathoms
St 1400 Carb 8 E	123		21.3 Fathoms
	<u>1200 Tons</u>		

Development:

Drift Carb 8 E	77	49
	<u>77 Tons</u>	<u>49 Tons</u>

Total Ore Mined 1277 Tons

ORE INVENTORY

	Tons
St 610 Ida 12 W	503
St 310 Ida 12 W	257
St 300 Ida 13 W	428
St 850 Ida 14 W	124
St 1 But 12 W	659
St 940 But 12 W	1040
Old Carb Stone Fill	9998
Carbonero Dump	25507
St 140 Carb 8 E	80
St 600 Carb 8 E	4367
St 800 Carb 8 E	911
St 900 Carb 8 E	<u>2220</u>

46094 Tons

\$332,948.75 Gross Value

TUNGSTEN ORE INVENTORY

Re 400 Ida 14 E 112 Tons @ \$32.50 - \$3640 Gross Value

ORE TRAMMED Car Factor 1.038 tons p/car

	Tons
Drift Carb 8 E	77
St 600 Carb 8 E	193
St 800 Carb 8 E	65
St 900 Carb 8 E	316
St 1400 Carb 8 E	123
St 850 Ida 14 W	52
	<u>826 Tons</u>

Daily Average:

31.77 tons/day

OPERATING REPORT

AUGUST 1953

P-2

WASHING PLANT

Tons of Waste Sorted 46
Per Cent of Trammed Ore 5.8%

ORE MILED

Silver Bell
Carbonero

Period	Previous Period	Total to Date
52	11245	11297
728	5900	6628
780	17145	17925

MILL OPERATION

Ball Mill Grinding Time 148.35 hrs. 20.05% Efficiency

CONCENTRATE SHIPMENTS

	Dry Weight	Net Value
Lot 112	33029	\$ 2558.55
Lot 113	21434	1793.96
Lot 114	42412	3490.75
	96875	\$ 7843.26

GROSS PAYROLL

August 1-15 \$ 5231.63
August 16-31 5134.82
\$ 10366.45

SILVER BELL MINES COMPANYGeneral Superintendent

OPERATING REPORTSEPTEMBER 1953P-1ORE MINED

<u>Productions:</u>	<u>Ore</u>	<u>Waste</u>	<u>Advance</u>
St 600 Carb 8 E	42		3.3 Fathoms
St 800 Carb 8 E	273		23.0 Fathoms
St 900 Carb 8 E	745		50.5 Fathoms
	1060 Tons		
Total Ore Mined	1060 Tons		

ORE INVENTORY

Tons

St 610 Ida 12 W	503
St 310 Ida 12 W	257
St 300 Ida 13 W	428
St 850 Ida 14 W	124
St 1 But 12 W	659
St 940 But 12 W	1040
Old Carb Stope Fill	9998
Carbonero Dump	25507
St 140 Carb 8 E	80
St 600 Carb 8 E	3104
St 800 Carb 8 E	1113
St 900 Carb 8 E	2649

45462 Tons

\$310,117.89 Gross Value

TUNGSTEN ORE INVENTORY

Rs 400 Ida 14 E 112 Tons @ \$32.50 - \$3640 Gross Value

ORE TRAMMED Car Factor 1.1889 tons p/car

	<u>Tons</u>
St 600 Carb 8 E	11305
St 800 Carb 8 E	71
St 900 Carb 8 E	316
St 1400 Carb 8 E	243

1935 Tons

Daily Average:

74.42 tons/day

OPERATING REPORT

SEPTEMBER 1953

P-1

WASHING PLANT

Tons of Waste Sorted 173
Per Cent of Trammed Ore 8.94%

ORE MILLED

	<u>Period</u>	<u>Previous Period</u>	<u>Total To Date</u>
Silver Bell		11297	11297
Carbonero	1762	6628	8390
	<u>1762</u>	<u>17925</u>	<u>19687</u>

MILL OPERATION

Ball Mill Grinding Time 372.45 hrs. 51.77% Efficiency

CONCENTRATE SHIPMENTS

	<u>Dry Weight</u>	<u>Net Value</u>
Lot 115	38446	\$ 3044.91
Lot 116	22504	1831.74
Lot 117	41992	3448.73
Lot 118	38113	2807.49
Lot 119	38870	2836.76 *
Lot 120	<u>42379</u>	<u>3393.31</u>
	222304	\$17362.94

* Hauled by Telluride Transfer Co.

GROSS PAYROLL

September 1-15 \$ 4827.18
September 16-30 4314.34
\$ 9141.52

SILVER BELL MINES COMPANYGeneral Superintendent

OPERATING REPORT

OCTOBER 1953

P-1

ORE MINED

Productions:	Ore	Waste	Advance
St 800 Carb 8 E	285		23.3 Fathoms
St 900 Carb 8 E	750		53.4 Fathoms
	1035 Tons		
Total Ore Mined	1035 Tons		

ORE INVENTORY

	Tons
St 610 Ida 12 W	503
St 310 Ida 12 W	257
St 300 Ida 13 W	428
St 850 Ida 14 W	124
St 1 But 12 W	659
St 940 But 12 W	1040
Old Carb Stope Fill	9998
Carbonero Dump	25507
St 140 Carb 8 E	80
St 600 Carb 8 E	1817
St 800 Carb 8 E	1210
St 900 Carb 8 E	3044
	44667 Tons

\$285,090.95 Gross Value

TUNGSTEN ORE INVENTORY

Rs 400 Ida 14 E 112 Tons @ \$32.50 - \$3640 Gross Value

ORE TRAMMED Car Factor 1.1481 tons p/car

	Tons
St 600 Carb 8 E	1287
St 800 Carb 8 E	188
St 900 Carb 8 E	355
	1830 Tons

Daily Average 67.78 tons/day

OPERATING REPORT

OCTOBER 1953

P-2

WASHING PLANT

Tons of Waste Sorted 208
Per Cent of Trammed Ore 11.36%

ORE MILLED

	Period	Previous Period	Total to Date
Silver Bell		11297	11297
Carbonero	1622	8390	10012
	1622	19687	21309

MILL OPERATION

Ball Mill Grinding Time 311.30 hrs. 41.87% Efficiency

CONCENTRATE SHIPMENTS

(LEAD)	Dry Weight	Net Value
Lot 121	38720	\$ 2678.26 *
Lot 122	33241	2346.15 *
Lot 123	40063	2757.09
Lot 124	38742	2550.62 *
Lot 125	36982	2320.85 *
Lot 126	45493	3455.34
Lot 127	18752	1457.94
	251993	\$17566.25

(ZINC)		
Lot 1	84968	1934.69 **

Combined Totals: \$19500.94

* Hauled by Telluride Transfer Co.

** Hauled by Rail

GROSS PAYROLL

October 1-15	\$ 4629.60
October 16-31	4186.85
Back Pay # 1	49.56
	\$ 8866.01

SILVER BELL MINES COMPANYGeneral Superintendent

OPERATING REPORT NOVEMBER 1953ORE MINED:

<u>PRODUCTION</u>	<u>Tons</u>	<u>Advance</u>
St 440 Carb 8 E	150	11.2 fathoms
St 800 Carb 8 E	333	26.1 fathoms
St 900 Carb 8 E	750	59.7 fathoms
Total ore mined	1233 tons	

ORE INVENTORY:

The value of the ore inventory is based on assays made prior to August 1953.

	<u>Tons</u>	<u>Value per Ton</u>
St 610 Ida 12 W	503	\$5.717
St 310 Ida 12 W	257	4.758
St 300 Ida 13 W	428	4.772
St 1 But 11 W	175	4.897
St 940 But 12 W	659	4.386
Old Carb Stope Fill	9,998	9.432
Carbonero Dump	25,507	4.793
St 140 Carb 8 E	80	7.418
St 440 Carb 8 E	145	4.524
St 600 Carb 8 E	900	26.890
St 800 Carb 8 E	1,204	13.233
St 900 Carb 8 E	3,412	14.719
	43,258 tons	
	@ \$7.35/ton	
	\$318,048 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED:

Car Factor 1.2390648 tons/car

	<u>Tons</u>	<u>Per Cent</u>
St 900 Carb 8 E	382	23.23%
St 800 Carb 8 E	339	20.66%
St 600 Carb 8 E	917	55.81%
St 440 Carb 8 E	5	0.30%
	1,643 tons	100.00%

Daily Average 65.72 tons/day

WASHING PLANT:

Tons of waste sorted: 268 tons
Per Cent of trammed ore 20.21%

ORE MILLED:

The ore milled section of the report is shown here for August through November to complete this section for the year. The mill tonnages previously reported for this period were wet tons.

	<u>AUGUST</u>		<u>Ore Value</u>		<u>To Date</u>	
	<u>Tonnage</u>		<u>Period</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Bell	47	11,292	\$ 128	\$ 87	\$ 55,434	\$ 37,695
Carb	657	6,557	\$11,912	\$ 8,100	\$ 87,233-	\$ 59,318
	704	17,849	\$12,040	\$ 8,187	\$142,667	\$ 97,013

	<u>Assays</u>					
	<u>Silver Bell</u>		<u>Carbonero</u>		<u>Combined</u>	
	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>Value</u>	<u>Assay</u>	<u>Value</u>
Au \$35	0.009	\$0.315	0.025	\$0.875	0.024	\$0.840
Ag 90%	0.958	0.862	2.565	2.309	2.458	2.212
Pb 14%	0.286	0.801	3.837	10.743	3.599	10.077
Cu 29.62%	0.058	0.344	0.222	1.315	0.211	1.250
Zn 10.885%	0.188	0.409	1.327	2.889	1.251	2.723
Gross		\$2.731		\$18.131		\$17.102
Net (68%)		\$1.857		\$12.329		\$11.629

	<u>SEPTEMBER</u>		<u>Ore Value</u>		<u>To Date</u>	
	<u>Tonnage</u>		<u>Period</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Bell		11,292			\$ 55,434	\$ 37,695
Carb	1,748	8,305	\$41,359	\$28,124	\$128,592	\$ 87,442
	1,748	19,597	\$41,359	\$28,124	\$184,026	\$125,137

	<u>Assays</u>	
	<u>Carbonero</u>	
	<u>Assay</u>	<u>Value</u>
Au \$35	0.029	\$1.015
Ag 90%	2.756	2.480
Pb 13.625%	5.431	14.799
Cu 29.621%	0.254	1.505
Zn 10.125%	1.907	3.862
Gross		\$23.661
Net (68%)		\$16.089

	<u>OCTOBER</u>		<u>Ore Value</u>		<u>To Date</u>	
	<u>Tonnage</u>		<u>Period</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Bell		11,292			\$ 55,434	\$ 37,695
Carb	1,496	9,801	\$38,709	\$26,322	\$167,301	\$113,764
	1,496	21,093	\$38,709	\$26,322	\$222,735	\$151,459

	<u>Assays</u>	
	<u>Carbonero</u>	
	<u>Assay</u>	<u>Value</u>
Au \$35	0.028	\$0.980
Ag 90%	3.298	2.968
Pb 13.5%	6.388	17.248
Cu 29.53%	0.197	1.163
Zn 10.0%	1.758	3.516
Gross		\$25.875
Net (68%)		\$17.595

ORE MILLED: cont.

NOVEMBER	Tonnage		Ore Value		To Date	
	Period	To Date	Gross	Net	Gross	Net
Bell		11,292			\$ 55,434	\$ 37,695
Carb	1,375	11,176	\$33,362	\$22,686	\$200,663	\$136,450
	1,375	22,468	\$33,362	\$22,686	\$256,097	\$174,145

Assays	
Carbonero	
Assay	Value
Au \$35	0.025 \$0.875
Ag 90¢	3.117 2.805
Pb 13.5¢	6.054 16.346
Cu 29.665¢	0.140 0.831
Zn 10.0¢	1.703 3.406
Gross	\$24.263
Net (68%)	\$16.499

MILL OPERATION:

Ball Mill Grinding Time 299.0 hr. 41.53% Efficiency

CONCENTRATES:

Lot	Dry Weight	Net Return
128	44,122 lb.	\$ 3,437.50
129	22,614	1,745.62
130	22,460	1,694.77
131	23,083	1,642.65
132	22,312	1,705.72
133	22,969	1,626.61
134	22,153	1,578.46
135	25,034	1,845.84
136	22,779	1,765.53
137	39,661	2,654.83
	267,187 lb.	\$19,697.53
	133.5935 tons.	

GROSS PAYROLL:

Nov. 1-15	\$4,317.30
Nov. 16-30	\$5,648.60
	\$9,965.90

SILVER BELL MINES COMPANY

H. I. Smith
General Superintendent

OPERATING REPORT DECEMBER 1953ORE MINED:

<u>PRODUCTION</u>	<u>Tons</u>	<u>Advance</u>
St 1140 Carb 8 E	370	21.4 fathoms
St 1440 Carb 8 E	357	27.2 fathoms
St 800 Carb 8 E	64	5.1 fathoms
St 900 Carb 8 E	508	39.4 fathoms
St 1400 Carb 8 E	164	13.4 fathoms
Total Ore Mined	1,463 tons	

ORE INVENTORY:

The value of the ore inventory is based on assays made prior to August 1953.

	<u>Tons</u>	<u>Value per ton</u>
St 610 Ida 12 W	503	\$5.717
St 310 Ida 12 W	257	4.758
St 300 Ida 13 W	428	4.772
St 1 But 11 W	175	4.897
St 940 But 12 W	659	4.386
Old Carb Stope Fill	9,998	9.433
Carbonero Dump	25,507	4.793
St 140 Carb 8 E	446	7.413
St 440 Carb 8 E	414	4.535
St 800 Carb 8 E	1,162	13.233
St 900 Carb 8 E	3,751	14.719
St 1400 Carb 8 E	147	20.099
	43,447 tons	
	@ \$7.02/ton	
	\$305,180 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED: Car factor 1.089983 tons/car

	<u>Tons</u>	<u>Per Cent</u>
St 140 Carb 8 E	4	0.34%
St 440 Carb 8 E	88	6.88%
St 800 Carb 8 E	951	74.02%
St 800 Carb 8 E	55	4.24%
St 900 Carb 8 E	169	13.16%
St 1400 Carb 8 E	17	1.36%
	1,284 tons	100.00%

Daily Average 49.38 tons/day

WASHING PLANT:

Tons of waste sorted: 209 tons
Per Cent of trammed ore: 16.28%

ORE MILLED:

	<u>Tonnage</u> <u>Period</u>	<u>To Date</u>	<u>Ore Value</u>		<u>To Date</u>	
			<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Bell		11,292			\$ 55,434	\$ 37,695
Carb	1,075	12,251	\$21,049	\$14,313	\$221,712	\$150,763
	1,075	23,543	\$21,049	\$14,313	\$277,146	\$188,458

AssaysCarbonero

	<u>Assay</u>	<u>Value</u>
Au \$35	0.021	\$0.735
Ag 90¢	2.367	2.130
Pb 13.5¢	4.757	12.844
Cu 29.67¢	0.165	0.979
Zn 10.0¢	1.446	2.892
Gross		\$19.580
Net (68%)		\$13.314

MILL OPERATION:

Ball Mill Grinding Time 230.75 hr. 31.01% Efficiency

CONCENTRATES:

<u>Lot</u>	<u>Dry Weight</u>	<u>Net Return</u>
138	33,202	\$1,767.20
139	22,866	1,460.70
140	21,598	1,333.17
141	21,827	1,289.90
142	22,362	1,375.21
143	21,772	1,346.85
144	23,467	1,449.42
145	22,189	1,286.33
	149,243 lb.	\$11,308.78
	94.6415 tons.	

Dec. 31 inventory: Lead Concentrates 11 tons
Zinc Concentrates 20 tons

GROSS PAYROLL:

Dec. 1-15	\$5,590.52
Dec. 16-31	\$5,488.01
	\$11,078.53

SILVER BELL MINES COMPANY

L. A. Smith
General Superintendent

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SILVER BELL INDUSTRIES
Operating Reports
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OPERATING REPORT JANUARY 1954ORE MINED:

<u>PRODUCTION</u>	<u>Tons</u>	<u>Advance</u>
St 140 Carb 8 E	243	15.0 fathoms
St 440 Carb 8 E	454	32.4 fathoms
St 800 Carb 8 E	26	2.1 fathoms
St 900 Carb 8 E	810	55.7 fathoms
St 1400 Carb 8 E	672	46.2 fathoms
	<u>2,205 tons</u>	

DEVELOPMENTRaises

St 800 Carb 8 E	90	45.0 feet
Total Ore Mined	<u>2,295 tons</u>	

ORE INVENTORY:

	<u>Tons</u>	<u>Value per ton</u>
St 610 Ida 12 W	503	\$5.681
St 310 Ida 12 W	257	4.742
St 300 Ida 13 W	428	4.757
St 1 But 11 W	175	4.866
St 940 But 12 W	659	4.368
Old Carb Stope Fill	9,998	9.344
Carbonero Dump	25,507	4.726
St 140 Carb 8 E	689	7.303
St 440 Carb 8 E	655	4.463
St 800 Carb 8 E	730	13.051
St 900 Carb 8 E	4,105	14.515
St 1400 Carb 8 E	558	19.113
	<u>44,264 tons</u>	
	@ \$7.038 Per ton	
	\$311,542 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED: Car Factor 1.1977309 tons/car

St 440 Carb 8 E	213	14.41%
St 800 Carb 8 E	548	37.08%
St 900 Carb 8 E	456	30.85%
St 1400 Carb 8 E	261	17.66%
	<u>1,478 tons</u>	<u>100.00%</u>

Daily Average 59.12 tons/day

WASHING PLANT:

Tons of waste sorted: 177 tons
Per Cent of trammed ore: 11.98%

<u>ORE MILLED:</u>			<u>Ore Value</u>			
<u>Tonnage</u>			<u>Period</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Carb	1301	1301	\$20,933	\$14,234	\$20,933	\$14,234

	<u>Assays</u>	<u>Value</u>
Au \$35	0.018	\$0.630
Ag 90¢	2.199	1.979
Pb 13.260¢	3.824	10.141
Zn 9.760¢	1.225	2.391
Cu 29.671¢	0.160	0.949
Gross		\$16.090
Net (68%)		\$10.941

MILL OPERATION:

Ball Mill Grinding Time 279.50 hr. 37.57% Efficiency

CONCENTRATES:

<u>Lot</u>	<u>Dry Weight</u>	<u>Net Return</u>
146	19,758	\$1,002.53
147	20,999	1,092.52
148	21,483	1,183.30
149	21,817	1,030.38
150	33,930	1,411.41
151	21,997	964.24
152	22,890	1,104.00
153	20,682	940.82
154	22,271	986.37
155	23,021	1,063.34
	228,848 lb.	\$10,778.91
	114.424 tons	

GROSS PAYROLL:

Jan. 1-15	\$ 5,770.35
Jan. 16-31	\$ 5,505.25
	<u>\$11,275.60</u>

SILVER BELL MINES COMPANY

Y. H. Smith
General Superintendent

OPERATING REPORTFEBRUARY 1954

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ORE MINED:

<u>PRODUCTION</u>	<u>Tons</u>	<u>Advance</u>
St 140 Carb 8 E	255	17.1 fathoms
St 440 Carb 8 E	312	22.2 fathoms
St 900 Carb 8 E	932	65.9 fathoms
St 1400 Carb 8 E	657	37.1 fathoms
	<u>2,156 tons</u>	

DEVELOPMENT:
Raises:
St 800 Carb 8 E 25 10.5 ft.
Total Ore Mined 2,181 tons

ORE INVENTORY:

	<u>Tons</u>	<u>Value per Ton</u>
St 610 Ida 12 W	503	\$5.618
St 310 Ida 12 W	257	4.712
St 300 Ida 13 W	428	4.729
St 1 But 11 W	175	4.814
St 940 But 12 W	659	4.337
Old Carb Stope Fill	9,998	9.190
Carbonero Dump	25,507	4.606
St 140 Carb 8 E	944	7.108
St 440 Carb 8 E	821	4.338
St 800 Carb 8 E	222	12.727
St 900 Carb 8 E	4,690	14.153
St 1400 Carb 8 E	978	18.639
	<u>45,182 tons</u>	
	\$316,831 Gross Value	
	@ \$7.012/ton	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED:

	<u>Tons</u>	<u>Car Factor; 1.0139573 tons/car</u>	<u>Per Cent</u>
St 440 Carb 8 E	146		11.82%
St 800 Carb 8 E	508		41.13%
St 900 Carb 8 E	347		28.10%
St 1400 Carb 8 E	234		18.95%
	<u>1,235 tons</u>		<u>100.00%</u>

Daily Average 45.74 tons/day

WASHING PLANT:

Tons of waste sorted: 150 tons
Per Cent of trammed ore: 12.15%

	<u>ORE MILLED:</u>		<u>Ore Value</u>		<u>To Date</u>	
	<u>Tonnage</u>		<u>Period</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Carb	1085	2386	\$18,782	\$12,772	\$39,715	\$27,006

		<u>Assays</u>	<u>Value</u>
Au	\$35	0.023	\$0.805
Ag	90¢	2.290	2.061
Pb	12.818¢	4.128	10.583
Zn	9.375¢	1.452	2.723
Cu	29.669¢	0.192	1.139
	<u>Gross</u>		\$17.311
	<u>Net (68%)</u>		\$11.771

MILL OPERATION:

Ball Mill Grinding Time 240.00 hr. 35.71% Efficiency

CONCENTRATES:

<u>Lot</u>	<u>Dry Weight</u>	<u>Net Return</u>
156	35,492 lb.	\$1,526.88
157	36,642	1,876.02
158	32,692	1,327.99
159	37,410	1,853.23
160	38,064	1,527.43
	<u>180,300 lb.</u>	<u>\$8,111.55</u>

90.15 tons

GROSS PAYROLL:

Feb. 1-15	\$4,775.67
Feb. 16-28	\$3,987.96
	<u>\$8,763.63</u>

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

File

OPERATING REPORT MARCH 1954

ORE MINED:

<u>PRODUCTION</u>	<u>TONS</u>	<u>ADVANCE</u>
St 140 Carb 8 E	422	30.0 fathoms
St 440 Carb 8 E	413	30.4 fathoms
St 900 Carb 8 E	1030	76.7 fathoms
St 1400 Carb 8 E	929	55.3 fathoms
Total Ore Mined	2794 tons	

ORE INVENTORY:

	<u>Tons</u>	<u>Value per ton</u>
St 610 Ida 12 W	503	\$5.642
St 310 Ida 12 W	257	4.723
ST 300 Ida 13 W	428	4.740
ST 1 But 11 W	175	4.838
St 940 But 12 W	659	4.350
Old Carb Stope Fill	9998	9.258
Carbonero Dump	25,507	4.654
St 140 Carb 8 E	1,155	7.221
St 440 Carb 8 E	1,065	6.428
St 900 Carb 8 E	5,356	14.476
St 1400 Carb 8 E	1,485	15.235
	46,588 tons	
	@ \$7.221 per ton	
	\$336,409 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 Tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED: Car factor 1.0813875 tons/car

	<u>Tons</u>	<u>Per Cent</u>
St 140 Carb 8 E	211	13.02%
St 440 Carb 8 E	169	10.43%
St 800 Carb 8 E	455	28.07%
St 900 Carb 8 E-	364	22.45%
St 1400 Carb 8 E	422	26.03%
	1,621	100.00%

Daily Average 54.03 tons/day

WASHING PLANT:

Tons of Waste sorted: 169 tons
Per Cent of trammed ore: 10.43%

ORE MILLED:

	<u>Tonnage</u> <u>Period</u>	<u>To Date</u>	<u>Ore Value</u> <u>Period</u>		<u>To Date</u>	
			<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Carb	1452	3838	\$19,291	\$13,118	\$59,006	\$40,124

	<u>Assays</u> <u>Carbonero</u>	
	<u>Assay</u>	<u>Value</u>
Au \$35	0.019	\$0.665
Ag 90¢	2.092	1.883
Pb 12.935¢	2.958	7.652
Zn 9.637¢	1.099	2.118
Cu 29.686¢	0.163	0.968
Gross		\$13.286
Net (68%)		\$ 9.034

MILL OPERATION:

Ball Mill Grinding Time 286.25 hr. 38.47% Efficiency

CONCENTRATES:

<u>Lot</u>	<u>Dry Weight</u>	<u>Net Return</u>
161	39,148	\$1,578.50
162	52,403	2,323.08
163	38,097	1,612.33
164	43,028	2,030.75
	172,676 lbs.	\$7,544.66
	86.338 tons	

GROSS PAYROLL:

Mar. 1-15	\$4,877.79
Mar. 16-31	\$4,960.17
	\$9,837.96

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

OPERATING REPORT APRIL 1954ORE MINED:

<u>PRODUCTION</u>	<u>TONS</u>	<u>ADVANCE</u>
St 140 Carb 8 E	86	6.4 fathoms
St 440 Carb 8 E	656	44.1 fathoms
St 900 Carb 8 E	912	68.9 fathoms
St 1400 Carb 8 E	469	36.1 fathoms
	2123 tons	

DEVELOPMENT

<u>RAISES</u>		
St 140 Carb 8 E	25	9.0 ft
St 1100 Carb 8 E	98	53.0 ft
<u>DRIPTS</u>		
St 1100 Carb 8 E	16	15.5 ft
(Drift over Pillars)		
	139 tons	

TOTAL ORE MINED 2262 tons

<u>ORE INVENTORY</u>	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$ 5.771
St 310 Ida 12 W	257	4.785
St 300 Ida 13 W	428	4.796
St 1 Rut 11 W	175	4.940
St 940 Rut 12 W	659	4.413
Old Carb Stope Fill 9998		9.560
Carb Dump	25,507	4.893
St 140 Carb 8 E	1,062	7.617
St 440 Carb 8 E	1,457	10.861
St 900 Carb 8 E	5,846	15.088
St 1400 Carb 8 E	1,695	15.324
	47,587 tons	
	@\$7.742/ton	
	\$368,437 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 Tons @ \$32.50 \$3640 Gross Value

<u>ORE TRAMMED:</u>	<u>TONS</u>	<u>PERCENT</u>
St 140 Carb 8 E	179	10.93%
St 440 Carb 8 E	264	16.12%
St 800 Carb 8 E	391	23.87%
St 900 Carb 8 E	422	25.76%
St 1100 Carb 8 E	123	7.51%
St 1400 Carb 8 E	259	15.81%
	1638 tons	100.00%
Daily Average	54.60 tons/day	

WASHING PLANT:

Tons of Waste Sorted 212 tons
Percent of trammed ore; 12.94%

ORE MILLED

	<u>Tonnage</u>		<u>Ore Value</u>		<u>To Date</u>	<u>Net</u>
	<u>Period</u>	<u>To Date</u>	<u>Gross</u>	<u>Net</u>		
Carb	1426	5264	\$20,996	\$14,277	\$80,002	\$54,401

	<u>Assays</u>	
	<u>Carbonero</u>	<u>Assay</u>
Au \$35	0.017	\$0.595
Ag 90¢	2.001	1.801
Pb 13.904¢	3.215	8.940
Zn 10.250¢	1.192	2.444
Cu 29.700¢	0.159	0.944
Gross		\$14.724
Net (68%)		\$10.012

MILL OPERATION

Ball Mill Grinding Time 324 hr. 45.00% Efficiency

Concentrates:

<u>Lot</u>	<u>Dry Weight</u>	<u>Net Return</u>
165	39,661	\$ 1,714.77
166	32,225	1,643.43
167	44,358	2,115.46
168	36,969	1,529.59
169	39,841	1,707.04
170	35,354	1,753.23
171	38,809	1,726.40
	267,217 lbs.	\$12,189.92
	133.6085 tons	

GROSS PAYROLL:

Apr 1-15	\$4,958.19
Apr 16-30	\$4,713.61
	\$9,671.80

SILVER BELL MINES COMPANY

H. Y. Smith
General Superintendent

File

OPERATING REPORT MAY 1954

ORE MINED:

<u>PRODUCTION</u>	<u>TONS</u>	<u>ADVANCE</u>
St 440 Carb 8 E	283	17.6 fathoms
St 900 Carb 8 E	1108	69.9 fathoms
St 1400 Carb 8 E	696	39.9 fathoms
	<u>2087 tons</u>	

DEVELOPMENT

<u>RAISES</u>		
St 440 Carb 8 E	31	15.4 feet
St 1100 Carb 8 E	68	28.3 feet

<u>DRIFTS</u>		
St 1100 Carb 8 E	69	30.2 feet
(Drift over Pillars)	<u>168 tons</u>	

TOTAL ORE MINED 2,255 tons

<u>ORE INVENTORY</u>	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$ 5.783
St 310 Ida 12 W	257	4.790
St 300 Ida 13 W	428	4.801
St 1 Put 11 W	175	4.948
St 940 Put 12 W	659	4.418
Old Carb Stope Fill	9,998	9.586
Carb Dump	25,507	4.914
St 140 Carb 8 E	977	7.654
St 440 Carb 8 E	1,588	10.914
St 900 Carb 8 E	6,352	15.156
St 1400 Carb, 8 E	2,086	15.397
	<u>48,530 tons</u>	
	@ \$7.920/ton	
	<u>\$384,352 Gross Value</u>	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 Tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED: Car factor 1,3064935 tons/car

	<u>TONS</u>	<u>PERCENT</u>
St 140 Carb 8 E	85	4.22%
St 440 Carb 8 E	183	9.10%
St 600 Carb 8 E	52	2.58%
St 800 Carb 8 E	660	32.81%
St 900 Carb 8 E	602	29.92%
St 1100 Carb 8 E	125	6.21%
St 1400 Carb 8 E	305	15.16%
	<u>2012 tons</u>	<u>100.00%</u>

Daily Average 67.07 tons/day

WASHING PLANT:

Tons of Waste Sorted 275 tons
Percent of trammed ore 13.67%

ORE MILLED:

	<u>Tonnage</u> <u>Period</u>	<u>To Date</u>	<u>Ore Value</u>		<u>To Date</u>	
			<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Carb	1737	7001	\$26,642	\$18,117	\$106,644	\$72,518

	<u>Assays</u> <u>Carbonero</u>	
	<u>Assay</u>	<u>Value</u>
Au \$35	0.017	\$0.595
Ag 90¢	2.242	2.018
Pb 14.000¢	3.130	8.764
Zn 10.286¢	1.443	2.969
Cu 29.700¢	0.167	0.992
Gross		\$15.338
Net (68%)		\$10.430

MILL OPERATION

Ball Mill Grinding Time 345.75 hr. 46.47% Efficiency

CONCENTRATES:

<u>LOT</u>	<u>DRY WEIGHT</u>	<u>NET RETURN</u>
172	37,112	\$ 2,023.19
173	33,780	1,757.92
174	36,337	1,806.93
175	35,614	1,907.87
176	33,104	1,679.08
177	32,220	1,448.67
	208,167 lbs.	\$10,623.66
	104.0835 tons	

GROSS PAYROLL

May 1-15	\$4,539.36
May 16-31	\$5,309.15
	\$9,848.51

SILVER BELL MINES COMPANY


General Superintendent

OPERATING REPORT JUNE 1954ORE MINED:

<u>PRODUCTION</u>	<u>TONS</u>	<u>ADVANCE</u>
St 900 Carb 8 E	886	62.7 fathoms
St 1400 Carb 8 E	204	14.1 fathoms
	<u>1090 tons</u>	

DEVELOPMENT

<u>RAISES</u>		
St 440 Carb 8 E	19	9.6 feet
St 1100 Carb 8 E	39	16.2 feet
<u>DRIFTS</u>		
St 1100 Carb 8 E	17	7.0 feet
(Drift over Pillars)	<u>75 tons</u>	

TOTAL ORE MINED	<u>1165 tons</u>
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<u>ORE INVENTORY</u>	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$ 5.823
St 310 Ida 12 W	257	4.809
St 300 Ida 13 W	428	4.820
St 1 Put 11 W	175	4.996
St 940 Put 12 W	659	4.442
Old Carb Stope Pill	9,998	9.715
Carb Dump	25,507	5.000
St 140 Carb 8 E	965	7.767
St 440 Carb 8 E	1,221	11.085
St 900 Carb 8 E	6,967	15.396
St 1400 Carb 8 E	2,208	15.598
	<u>48,889 tons</u>	
	@ \$8.129/ton	
	\$397,429 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 Tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED: Car factor 1.1742673 tons/car

	<u>TONS</u>	<u>PERCENT</u>
St 140 Carb 8 E	12	1.34%
St 440 Carb 8 E	386	43.04%
St 600 Carb 8 E	29	3.23%
St 800 Carb 8 E	35	3.90%
St 900 Carb 8 E	271	30.21%
St 1100 Carb 8 E	82	9.14%
St 1400 Carb 8 E	82	9.14%
	<u>897 tons</u>	<u>100.00%</u>
Daily Average	35.88 tons/day	

Tons of Waste Sorted 269 tons
Percent of trammed ore 9.71%

ORE MILLED

	Tonnage Period	to Date	Ore Value		To Date	
			Period Gross	Net	Gross	Net
Carb	810	7811	\$12,634	\$8,591	\$119,278	\$81,109
Carribeau	1692	1692	\$10,605	\$7,212	\$10,605	\$7,212
Dump	2502	9503	\$23,239	\$15,803	\$129,883	\$88,321

	Assays		Carribeau Dump		Combined	
	Carbonero		Assay	Value	Assay	Value
Au \$35	0.017	\$0.595	0.007	\$0.232	0.010	\$0.350
Ag 90¢	2.242	\$2.018	0.982	0.884	1.390	\$1.251
Pb 14.106¢	3.130	\$8.830	0.974	\$2.748	1.672	\$4.717
Zn 10.960¢	1.443	\$3.163	0.823	\$1.804	1.024	\$2.245
Cu 29.700¢	0.167	\$0.992	0.101	\$0.600	0.122	\$0.725
Gross		\$15.598		\$6.268		\$9.289
Net (68%)		\$10.607		\$4.262		\$6.316

MILL OPERATION

Ball Mill Grinding Time 475.00 hr. 65.97% Efficiency

CONCENTRATES

LOT	DRY WEIGHT	NET RETURN
178	34,317	\$ 1,495.88
179	36,635	1,652.71
180	35,500	1,171.31
181	36,593	1,354.21
182	33,218	1,368.36
183	27,752	909.67
	204,015 lbs	\$ 7,952.14
	102.0075 tons	

GROSS PAYROLL

June 1-15	\$4,916.46
June 16-30	\$4,663.53
	\$9,579.99

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

OPERATING REPORT JULY 1954

ORE MINED:

<u>PRODUCTION</u>	<u>TONS</u>	<u>ADVANCE</u>
St 900 Carb 8 E	366	26.3 fathoms
St 1400 Carb 8 E	409	28.7 fathoms
	775 tons	

<u>ORE INVENTORY:</u>	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$ 5.814
St 310 Ida 12 W	257	4.804
St 300 Ida 13 W	428	4.816
St 1 But 11 W	175	4.992
St 940 But 12 W	659	4.438
Old Carb Stope Fill 9998		9.699
Carb Dump	25,507	4.985
St 140 Carb 8 E	845	7.735
St 440 Carb 8 E	811	11.040
St 900 Carb 8 E	6,509	15.396
St 1400 Carb 8 E	2,355	14.337
	48,047 tons	
	@\$7.984/ton	
	\$383,608 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 Tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED: Car Factor 1.1742673 tons/car
(Av. Jan.-May Factor)

	<u>TONS</u>	<u>PERCENT</u>
St 140 Carb 8 E	120	7.31%
St 440 Carb 8 E	410	24.99%
St 900 Carb 8 E	13	0.79%
St 900 Carb 8 E	824	50.21%
St 1100 Carb 8 E	12	0.73%
St 1400 Carb 8 E	262	15.97%
	1641 tons	100.00%

Daily Average 71.3 tons/day

WASHING PLANT:

Tons of Waste Sorted	226 tons
Percent of trammed ore	13.77%

ORE MILLED

	Tonnage		Value		To Date	
	Period	To Date	Gross	Net	Gross	Net
Carbonero	1506	9317	\$23,409	\$15,918	\$142,687	\$ 97,027
Carribeau dump	1008	2700	\$ 2,628	\$ 1,787	\$ 13,233	\$ 8,999
	<u>2514</u>	<u>12,017</u>	<u>\$26,037</u>	<u>\$17,705</u>	<u>\$155,920</u>	<u>\$106,026</u>

ASSAYS

	Carbonero Ore		Carribeau Dump		Combined	
	Assay	Value	Assay	Value	Assay	Value
Au \$35	0.017	\$0.595	0.002	\$0.080	0.011	\$ 0.385
Ag 90%	2.242	\$2.018	0.382	0.344	1.492	1.343
Pb 14.00%	3.130	\$8.764	0.141	0.395	1.932	5.410
Zn 11.00%	1.443	\$3.175	0.604	1.329	1.107	2.435
Cu 29.70%	0.167	\$0.992	0.079	0.469	0.132	0.784
Gross		\$15.544		\$2.607		\$10.357
Net (68%)		\$10.570		\$1.774		\$ 7.043

MILL OPERATION:

Ball Mill Grinding Time 557.00 hr. 74.87% Efficiency

CONCENTRATES

LOT	DRY WEIGHT	NET RETURN
184	31,574	\$1342.41
185	32,703	1183.04
186	31,876	1095.17
187	39,474	1966.35
188	65,065	2864.69
	<u>200,692 lb.</u>	<u>\$8,451.66</u>
	100.346 tons	

GROSS PAYROLL

July 1-15, 1954	\$4,902.27
July 16-31, 1954	\$4,486.15
	<u>\$9,388.42</u>

SILVER BELL MINES COMPANY

L. H. Smith
General Superintendent

OPERATING REPORT AUGUST 1954

File

ORE MINED:

PRODUCTION: NONE

DEVELOPMENT: NONE

<u>ORE INVENTORY:</u>	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$ 5.820
St 310 Ida 12 W	257	4.807
St 300 Ida 13 W	428	4.818
St 1 But 11 W	175	4.996
St 940 But 12 W	659	4.441
Old Carb Stope Fill	9,998	9.711
Carb Dump	25,507	4.996
St 140 Carb 8 E	845	7.755
St 140 Carb 8 E	811	11.068
St 900 Carb 8 E	5130	15.432
St 1400 Carb 8 E	976	14.373
	45,289 tons	
	@ \$7.580/ton	
	\$343,272 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 Tons @ \$32.50 \$3640 Gross Value

<u>ORE TRAMMED:</u>	<u>Car Factor</u>	<u>TONS</u>	<u>PERCENT</u>
ST 900 Carb 8 E	1.2530667 tons/car	1379	50.00%
ST 1400 Carb 8 E		1379	50.00%
		2758 tons	100.00%

Daily Average 106.08 tons/day

WASHING PLANT:

Tons of Waste Sorted 252 tons
Percent of trammed ore 9.14%

ORE MILLED:

	<u>Tonnage</u>		<u>Value</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Period</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Carbonero	2506	11,823	\$41,023	\$27,897	\$183,710	\$124,924
Carribeau Dump	---	2,700	---	---	\$ 13,233	\$ 8,999
	2506	14,523	\$41,023	\$27,897	\$196,943	\$133,923

ASSAYSCarbonero Ore

	<u>Assay</u>	<u>Value</u>
Au \$35	0.016	\$0.560
Ag 90¢	2.007	\$1.806
Pb 14.058¢	3.397	\$9.551
Zn 11.000¢	1.549	\$3.408
Cu 29.700¢	0.176	\$1.045
Gross		\$16.370
Net (68%)		\$11.132

MILL OPERATION:

Ball Mill Grinding Time 549.70 hr. 73.88% Efficiency

CONCENTRATES:

<u>LOT</u>	<u>DRY WEIGHT</u>	<u>NET RETURN</u>
189	36,229	\$ 1839.22
190	38,106	1898.85
191	39,559	1761.09
192	34,559	1574.11
193	40,535	2117.74
194	36,065	1877.36
195	72,089	3847.09
	297,142 lb.	\$14,915.46
	148.571 tons	

Carload Zinc Lot. No Return Yet

GROSS PAYROLL

August 1-15	\$4,147.96
August 16-31	\$4,429.54
	\$8,577.50

CORRECTION FOR JULY REPORT:MILL OPERATION:

Ball Mill Grinding Time 606.50 hr. 82.52% Efficiency

SILVER BELL MINES COMPANY

G. H. Smith
General Superintendent

OPERATING REPORT SEPTEMBER 1954

File

ORE MINED:

PRODUCTION: NONE

DEVELOPMENT: NONE

ORE INVENTORY:

	<u>Tons</u>	<u>Value Per Ton</u>
St 610 Ida 12 W	503	\$ 5.895
St 310 Ida 12 W	257	4.843
St 300 Ida 13 W	428	4.851
St 1 But 11 W	175	5.056
St 940 But 12 W	659	4.477
Old Carb Slope Fill	9,998	9.889
Carb. Dump	25,507	5.135
St 140 Carb 8 E	845	7.984
St 440 Carb 8 E	811	11.406
St 900 Carb 8 E	3,594	15.875
	42,777 tons	
	@ \$7.317 per ton	
	Gross Value \$313,020	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED:

Car Factor 1.1264573 tons/car

	<u>Tons</u>	<u>Per Cent</u>
St 900 Carb 8 E	1,536	61.15%
St 1400 Carb 8 E	976	38.85%
	2,512 tons	100.00%

Daily Average 96.62 tons/ day

WASHING PLANT:

Tons of Waste Sorted 319 tons
Per Cent of trammed Ore 12.70%

ORE MILLED:

	<u>Tonnage</u>		<u>Value</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Gross</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Carbonero Mine	2,193	14,016	\$40,239	\$27,363	\$223,949	\$152,287
Carribeau Dump	2,193	2,700			\$ 13,233	\$ 8,999
	2,193	16,716	\$40,239	\$27,363	\$237,182	\$161,286

ASSAYS

Carbonero Ore

	<u>Assay</u>	<u>Value</u>
Au \$35	0.013	\$ 0.455
Ag 90¢	2.318	2.086
Pb 14.598¢	3.888	11.351
Zn 11.408¢	1.542	3.518
Cu 29.700¢	0.158	0.939
	Gross	\$18.349
	Net (68%)	\$12.477

MILL OPERATION:

Ball Mill Grinding Time 590.91 hr. 82.07% Efficiency

CONCENTRATES:

<u>Lot</u>	<u>Dry Weight</u>	<u>Net Return</u>
196	32,508	\$2,021.44
197	38,314	2,029.90
198	41,660	2,424.82
199	40,046	2,352.44
200	38,013	2,225.12
201	37,318	2,228.49
202	36,080	2,231.81
203	40,411	2,380.47
204	39,705	2,367.15
	<u>344,055 lbs.</u>	<u>\$20,261.64</u>
	172.0275 tons	-41.09
		<u>\$20,220.55</u>
		Less
		base labor
		charge
Zinc Lot 2 Apr. 8, 1954	50.6675 tons	\$1,021.07
(not previously reported)		
Zinc Lot 3 Sept. 28, 1954	55.4815 tons	\$ 60.14

GROSS PAYROLL:

Sept. 1-15	\$4,285.61
Sept. 16-30	\$3,997.79
	<u>\$8,283.40</u>

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

OPERATING REPORT OCTOBER 1954ORE MINED:

Production: None

Development: None

ORE INVENTORY:

	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$ 5.938
St 310 Ida 12 W	257	4.863
St 300 Ida 13 W	428	4.869
St 1 But 11 W	175	5.086
St 940 But 12 W	659	4.497
Old Carb Stope Fill	9,998	9.981
Carb Dump	25,507	5.211
St 140 Carb 8 E	845	8.119
St 440 Carb 8 E	811	11.604
St 900 Carb 8 E	1,344	16.127
	40,527 tons	
	@ \$6.929/ton	
	\$280,829 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED:

	<u>TONS</u>	<u>PER CENT</u>
St 900 Carb 8 E	2,250 tons	100.00%

Daily average 86.5 tons/day

WASHING PLANT:

Tons of waste sorted: 282 tons
 Per Cent of trammed ore: 12.53%

ORE MILLED:

	<u>Tonnage</u>		<u>Value</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Period</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
			<u>Gross</u>			
Carbonero Mine	1,968	15,984	\$32,500	\$22,100	\$256,449	\$174,387
Carribeau Dump		2,700			\$ 13,233	\$ 8,999
	1,968	18,684	\$32,500	\$22,100	\$269,682	\$183,386

AssaysCarbonero Ore

	<u>Assay</u>	<u>Value</u>
Au \$35	0.010	\$ 0.350
Ag 90¢	2.148	1.933
Pb 14.965¢	3.415	10.221
Zn 11.500¢	1.338	3.077
Cu 29,700¢	0.157	0.933
	Gross	\$16.514
	Net (68%)	\$11.230

MILL OPERATION:

Ball Mill Grinding Time: 558.25 hr. 75.03% Efficiency

CONCENTRATES:

<u>LOT</u>	<u>DRY WEIGHT</u>	<u>NET RETURN</u>
205	39,984	\$ 2,333.69
206	39,485	2,450.02
207	37,964	2,269.01
208	32,349	1,747.76
209	38,479	2,047.60
210	33,762	1,768.68
211	33,541	1,932.78
212	37,658	1,982.57
	293,222 lbs.	\$16,532.11
	146.611 tons	

GROSS PAYROLL:

Oct. 1-15	\$3,973.55
Oct. 16-31	\$3,497.20
	<u>\$7,470.75</u>

SILVER BELL MINES COMPANY

H. H. Smith
General Superintendent

OPERATING REPORT NOVEMBER 1954ORE MINED: The last day worked at the Carbonero Mine was Nov. 17, 1954.Production: NoneDevelopment: None

<u>ORE INVENTORY:</u>	<u>TONS</u>	<u>VALUE PER TON</u>
St 610 Ida 12 W	503	\$ 5.942
St 310 Ida 12 W	257	4.865
St 300 Ida 13 W	428	4.871
St 1 But 11 W	175	5.089
St 940 But 12 W	659	4.499
Old Carb Stope Fill	9,998	9.988
Carb Dump	25,507	5.218
St 140 Carb 8 E	845	8.131
St 440 Carb 8 E	811	11.621
St 900 Carb 8 E	294	16.149
	39,477 tons	
	@ \$6.692/ton	
	\$264,180 Gross Value	

TUNGSTEN ORE INVENTORY:

Rs 400 Ida 14 E 112 tons @ \$32.50 \$3640 Gross Value

ORE TRAMMED:

	<u>TONS</u>	<u>PER CENT</u>
St 900 Carb 8 E	1,050 tons	100.00%

Daily Average 75.0 tons/day

WASHING PLANT:

Tons of waste sorted: 133 tons
 Per cent of trammed ore: 12.67%

ORE MILLED:

	<u>Tonnage</u>		<u>Value</u>		<u>To Date</u>	
	<u>Period</u>	<u>To Date</u>	<u>Period</u>	<u>Net</u>	<u>Gross</u>	<u>Net</u>
Carbonero Mine	917	16,901	\$13,981	\$ 9,507	\$270,430	\$183,894
Carribeau Dump		2,700			\$ 13,233	\$ 8,999
	917	19,601	\$13,981	\$ 9,507	\$283,663	\$192,893

ASSAYSCarbonero Ore

	<u>Assay</u>	<u>Value</u>
Au \$35	0.018	\$0.630
Ag 90%	1.708	1.537
Pb 15.000%	2.786	8.358
Zn 11.500%	1.676	3.855
Cu 29.700%	0.146	0.867
	Gross	\$15.247
	Net (68%)	\$10.368

MILL OPERATION:

Ball Mill Grinding Time 221.75 hr 30.80% Efficiency

The last day the mill operated was Nov, 20, 1954.

CONCENTRATES:

<u>LOT</u>	<u>DRY WEIGHT</u>	<u>NET RETURN</u>
213	38,267	\$2,488.39
214	39,035	\$2,714.43
	<u>77,302 lbs.</u>	<u>\$5,202.82</u>
	38.651 tons	

GROSS PAYROLL:

Nov. 1-15	\$3,371.63
Nov. 16-30	<u>\$2,422.28</u>
	<u>\$5,793.91</u>

SILVER BELL MINES COMPANY

L. H. Smith
General Superintendent

Carb. mine closed 11-17-54

~~Case 02-277 1,47000~~

Tramming Record - Carbonero Mine Nov. 1952

Tramming Record - Carbonero Mine Nov. 1952

Tramming Record - Carbonero Mine Nov. 1952

Date	ST 600 Carb SE	ST 800 Carb SE	ST 800 Carb SE	ST 900 Carb SE	Shooting Tagged	Shift Card SE	Total Ore	Total	A. Skorge	A. Campbell	A. Davidson
1		12	21	6			5	1	4		
2	22	22					12		2	1	
3	12	27					44		3	2	
4	19	29					39		3	1	
5	13	27					48		3	2	
6	36	8					40		3		
7	19						41			3	
8	38				4		19			3	
9	30				3		38	4		2	
10	24				1		30	3		2	
11							33	1		2	
12							38			3	
13											
14											
15											
16											
17											
18											
19											
20											
21	27				2		35			1	
22	14						41			3	
23	9						40			4	
24	5						17			3	
25							24			2	
26							20			3	
27											
28											
29											
30											
Total Ore	317	148	1	136	17	74	675	18	212	32	432
Tone	384	180		165		90	819		115	2.83	82.2
						Pump One	83		1045	7.44	819
						Silver Bell Outrid Ore	901				

Carboxero Mine

Oct 1952 Car factor 1.343422 Ton/cay

[illegible]

1435634
Sept 15 2
Chester 1435634

TRAMMING RECORD, MOTOR, CARBONERO MINE AUGUST 1-31, 1952

Shift 1

	Drift	St 600	St 450	St 50	Ore Truck	Total Ore	Drift Panama	Total Waste
Table	Carb B E	Carb B E	Carb B E	Carb B E				
1								
2								
3								
4								
5								
6								
7								
8								
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TRANVING AIRBORNE, INCORP., 1000 1-11, 1942

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MAY 13 1961

CHEV 019283

1-52-1957
2-5-1957

	Drift	500	St 40	St 50	Dre	Total	East	West	Total
	Drift	Packetage	Carb	Carb	Truck				
Date	Carb	A	5	A	5	Dre	Jan	Jan	Waste
1									
2									
3									
4									
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30									
31									

Car Factor 2.73/6 tons/car

CHEV 019285

Date

1	2	3	4	5	6	7	8	9	10
1									
2									
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TRAMMING RECORD - CARBONERO MINE JANUARY 1953

Truck Drivers

Date	Drift CARB SE	5+600 CARB SE	Total ORE	Truck Drivers				
				Herrera	Carlson	Waltson	Avery Campbell	Bente
12		7	7					
13	18	6	24					
16	8		8					
17	14	5	19			2		
18								
19	17	5	22					
20	16	10	26					
21	16	2	18					
22								
23	15		15			4		
24	15	8	23					
25								
26	14	8	22		1			
27	14	9	23		1			
28	14	9	23	3			1	
29	14	26	40				1	2
30	14	16	30					2
31	19	11	30					2
	208	122	330	3	2	6	2	6
				19 Loads				

Date	800x 200 Backstop	5x 800 Camp SE	8x 600 Camp SE	8x 140 Camp SE	West Carb Ditch	West	Total Ore	Walby	Pattingil
1									
2								1	
3	20						20	2	
4	20						20	3	1
5	30						30	2	2
6	20		23				43	2	3
7	28		20				48	3	3
8	50						50	4	3
9			20				20	3	3
10	16		10	2		2	28	3	3
11	40		10				50	3	3
12	40						40	3	3
13	20		22				42	4	4
14									
15	48						48	3	3
16			10				10	3	4
17	30						30	2	2
18	30		20				50	3	3
19	10	20	10				40	3	3
20									
21									
22									
23									
24	27	3					30	2	2
25	49				1		50	2	3
26	29				2		31	1	4
27	38		10		2		51	4	4
28	28		10		1		39	3	3
29									
30	16	24					40	1	2
31	50						50	3	3
Cars	639	47	165	2	6		860	63	66
Tons	857 877	63 65	223 228	3 3	8 8		1154 Tons 1181	8.9 Tons/Load	

Tramming Record Carbonero Mine
April 1953

1.523333 Tons/car

April 1935										Ore Trucks			
Date	Drift Carb SE Waste	Drift Carb SE	900 Backstop Ore	900 Backstop Waste	St 600 Carb SE	St 800 Carb SE	Wood Box Pile	Total Ore	Campbell	Hightown	Pittsford	Walby	
1			9	39			2	11			2	4	
2		13			10		2	25			3	2	
3		19			10	10	1	40			3	3	
4		21			9	8	2	40			4	3	
5													
6		19			10	1		30			1	2	
7													
8													
9													
10													
11		10				10		20	4		4		
12													
13		12			10	11		33		4	5		
14		17			13			30			4	1	
15		16			24	6		46			3	2	
16		19				31		50			3	4	
17		11			21			32			4	4	
18		18			30			48	1		4	4	
19													
20		32			10			42			3	3	
21	5	8				12		20			2	2	
22		10			15	15		40			3	3	
23					30			30			2	1	
24						20		20			2	3	
25						10		10			1	1	
26													
27						20		20				1	
28					10			10				1	
29	17	3						3					
30													
Cars	22	228	9	39	202	154	7	600					
Tons		347	14		308	234	11	914					

Date	Drift Carb 8E Waste	Drift Carb 8E Ore	57 600 Carb 8E	57 800 Carb 8E	57 900 Carb 8E	57 140 Carb 8E	Waste	Total Ore
1								
2								
3								
4	18		3					3
5			21	6		3		30
6		10	10	6		8		24
7	3		2	19				21
8			10	20				30
9			13	14		13		27 13
10								
11			1	9	10			20
12	11	4	11	14		1		25 1
13	5		10	2	8			20
14	4	17	9	25	3			37
15		10	10	20				30
16			20		10			30
17								
18		13	12		17	8		30 20
19		9		30	11	25		50 25
20			10	4 10	12 5	14		25 30
21			10 10	10	16			26 20
22					12	23		12 23
23			15		30		2	15 30
24								
25			5 9	8	3			20 5
26		6 5	20		5			30
27			5	13	21			34 5
28		10		5 6	5 15			31 10
29		3	5 18		19			40 5
30	10		11	7	12			30
31								
Cats	98	77	232	256	251	11	2	827
Tons		89	269	296	290	13		957

Tramming Record Carboners Mine June 1953 Night Shift

Line	East End Dist. on Dist. whole	ST 900	ST 800	ST 600	Total one
1	13	1			1
2	13		1		1
3	8			2	2
4	18				
5	16	4			4
6	2	4			18
7	13				13
8	12				12
9	13		10		23
10					
11	17	11			28
12	14				14
13	15	15			30
14					34
15	14				14
16	15				15
17	13				13
18	10	16			26
19	4	20			24
20	15	1			16
21	12				12
22					
23	12	21			21
24	21				19
25	19				
26	13	7			20
27	20				20
28					
29	12				12
30	16	12			12
					370
31	24 5	112	11	2	
32	124				
33					
34					
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57					
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59					
60					

June	East Shift	East Shift	East Shift	West Shift	Total One	
1	10	17	8	4	29	
2		10		20	30	
3		20	17	3	40	
4		28		11	40	
5		20	7	10	37	
6		11	11	20	42	
7						
8		2		24	26	
9		25	10		35	
10		18	17	5	40	
11		21	9		30	
12		37	11		48	
13		14		6	20	
14						
15		20	10		30	
16		2	16		18	
17		24		16	40	
18		22		18	40	
19		14	5	10	29	
20		11	15	14	40	
21						
22		6	5		11	
23		25	25		50	
24		30	5		35	
25		10		20	30	
26		16	10	5	31	
27	2	18	10		30	
28						
29		18		13	31	
30		18	15	7	40	
<hr/>						
Day Shift	2	10	45.8	20.6	20.6	87.2
Night Shift	24.5	12.4	11.2	1.1	2	37.0
Total Cars	24.7	13.4	57.0	21.7	20.8	124.2
Tons	262		604	230	220	1316 Tons
<hr/>						
$\frac{1316}{124.2} = 1.0595813 \text{ tons/car}$						

Carbonero Mine - Trammig Record Night Shift July 1953

Date	Est Cost Night Vagte Ore	Est 900 C&B&E	Est 600 C&B&E	Total Ore
1	16	14		30
2	18			
3				
4				
5				
6				
7				
8	10			10
9	10 4			10
10	10 8			10
11				
12				
13	10			
14	17 10			17
15	4			4
16	18			18
17			4	4
18	10			10
19				
20	8			8
21			3	3
22	16			16
23				
24	10			10
25				
26				
27				
28	10			10
29	7			7
30	6 10			6
31	18 12			18
18	158	26	7	191

Carbonero Mine. Trammig Record Day Shift July 1953

$$\frac{981}{809} = 1.2126081 \text{ tons/car}$$

Date	East Carb Drift Waste	ST 900 Carb 8E	ST 800 Carb 8E	ST 600 Carb 8E	Waste	Total Mine One
1		10	14	10		30
2		12		4		16
3		8		16		24
4						
5						
6		12		20		32
7		10		5		15
8		25		5		30
9	4	9		21		34
10	8			22		30
11		20				20
12						
13	10	10				20
14	10	30				40
15		20	4	10		30
16		7				7
17		14		4		14
18		15		15		30
19						
20			8		2	
21				29	3	29
22		37				37
23		25		15		40
24		21				21
25		10				10
26						
27			21			21
28			20			20
29			20			20
30	10		16			26
31	12		10			22
<hr/>						
Night Shift 18	54	295	107	162	2	618
18	158	26		7		191
18	212	321	107	169	2	809 ✓
<hr/>						
Tons	257	389	130	205		981

82655 - 1.0383793 Tons/Car
196

Carbonero Mine Trammig Record August 1953

Aug.	East Carbonero Drift		Carb. St. 600		Carb. St. 800		Carb. St. 900		Carb. St. 1400		Totals	
	Waste	Ore	Waste	Ore	Waste	Ore	Waste	Ore	Waste	Ore	Waste	Ore
1	1	17						30			1	47
2		16		5			20					41
3		7		23			25					55
4		17		13			15					45
5				10			5					15
6		17					15					32
7							25					25
8												
9												
10							7					7
11	17						20				17	20
12							25					25
13												
14	16										16	
15							12					12
16												
17	10						17				10	17
18	3			25							3	25
19				23								23
20				25								25
21				10			20					30
22				40								40
23												
24								21				21
25							30					30
26				15			15					35
27				20			10					30
28				5			5					38
29												28
30												
31												
	47	511	74	9.2% - 186.23%	63	7.8% - 305.37.8%	48	14.6%	47			80
												746
												50
												796 Cars
												827 Tons Milled

CARBONERO MINE TRAPPING RECORD - September 1953

TOTALS

	ST 600	ST 800	ST 900	ST 1400	WASTE	ORC	OUTSIDE ORC RISE	CRAB TRUCK WHEEL	WASH PLANT WASTE
1			30	50		80	76	8	10
2			10	54		64	82	8	8
3	3		5	82		90	82	7	6
4	54		5	5		64	69	10	7
5	20	10	37	13		80	36	7	3
7									
8			15			15		6	1
9	73		5			78	36	6	5
10	65		5			70	36	7	7
11	14	15				29	48	6	5
12	80					80	72	5	7
14	80	10	10			100	72	8	10
15	50	10				60	92	8	10
16	32		7			39	80	4	7
17	23		26			49	48	6	8
18	47		13			60	66	7	7
19	50		10			60	46	5	9
21	60	5				70	83	8	13
22	63		5			68	60	7	10
23	50	10				60	48	6	6
24	49		5			54	48	2	6
25	51		20			71	60	7	7
26	53					53	77	9	8
28	73		11			84	51	5	7
29	65		25			90	64	8	11
30	93		27			60	46	4	13
	1088	60	276	204		1628	1498	166	191

Carbonero Mine Trammings - September 1953

1188691-AP-CAR

TOTALS

	St. 600	St. 800	St. 900	St. 1400	Waste Ore	O/S Ore Rs	Rock Loads	W/Plant Waste
1			30	50	80	72	8	10
2			10	51	64	82	8	8
3	3		5	82	70	82	7	6
4	51		5	5	64	69	10	7
5	20	10	37	13	80	36	7	3
6								
7								
8			15		15	24	5	1
9	73		5		78	36	6	5
10	65		5		70	36	7	
11	14	15			29	48	6	5
12	30				80	72	5	7
13								
14	80	10	10		100	72	8	5
15	50	10			60	92	8	5
16	42		7		49	80	6	7
17	23		26		49	48	6	8
18	47		13		60	66	7	7
19	50		10		60	54	5	8
20								
21	60	5	5		70	83	8	13
22	63		5		68	70	7	10
23	50	10			60	48	6	6
24	1		5		54	98	2	6
25	51		20		71	60	7	7
26	53				53	77	9	8
27								
28	73		11		84	51	4	7
29	65		15		60	64	8	11
30	33		27		60	46	4	13
	1098	60	266	204	1	1516	164	173
	16744%	10369%	1634%	1253%				
	1305 Tons	71 Tons	346 Tons	243 Tons	2008	1802 Tons	1098 Tons P/Load	173 Tons

Operating Report - September 1953

				Ore	Waste	Fathoms	Ave. Width
Ore Mined Production							
St	600	Carb	8 E	42		3.3	3.5
	800			273		23.0	3.3
	900			745		50.5	4.1
				1,060 tons			
Ore Inventory				Tons			
St	610	Ida	12 W	503	5306	266872	
	310			257	4566	117346	
	300		13 W	428	4579	175981	
	850		14 W	124	2288	28371	
	1	Bay	12 W	659	4279	281986	
	940			1040	4123	428792	
Old Carb Slope Fill				9998	7875	7873452	
Carbonado Dump				Sub: 38516	3822	9788775	Sub: 18941595
St	140	Carb	8 E	80	6072	48576	
	600			3104	24097	7479709	
	800			1113	11407	1269599	
	900			2649	12353	3272310	
				45462 tons	Gross Value	31011789	
Jungsten Ore Inventory							
St 400 Ida 14 E 112 tons @ \$32.50 = \$3640 Gross Value							

September 1953

Carbonaceous Truck Loads

Ball Mill Grinding Time

	Carbonaceous Truck Loads				Ball Mill Grinding Time		
	RLC	RLC	JBN	Total	1	2	3
1		4	4	8	6	8	8
2		4	4	8	8	7 15	8
3		3	4	7	8	8	8
4		5	5	10	8	8	
5		4	3	7			
6							
7							
8	2		3	5	4 30	8	8
9		3	3	6	5		
10		3	4	7			
11		2	4	6	7 30	8	8
12		2	3	5	8	8	7 15
13							
14		4	4	8	7 30	8	4 30
15		4	4	8	4 15	8	5
16		3	3	6	5 30	7 15	
17		4	2	6	2	7 15	
18		3	4	7	7 15	7 15	
19		2	3	5	7 15	7	
20							
21		4	4	8	7	7 15	
22		3	4	7	7	7 15	
23		3	3	6	7	6 30	
24		1	1	2	5	7 15	
25		4	3	7	7	7 15	
26		4	5	9	5 30	7 15	
27							
28			4	4	6	7 30	
29	4		4	8	6 15	7 30	
30			4	4	5 45	7 30	
Totals				144	146 45	168 45	57 15
					Sheet 1		
					2	146 45	
					3	168 45	
						57 15	
					Total	372 45	
					51.77 % Efficiency		

Operating Report - October 1953

				Orc	Waste	Fathoms	Ave. Width
Orc Mined Production							
St	800	CARB	8 E	285		23.3	34
	900			750		53.4	39
Total Orc Mined				1035			
Orc Inventory							
St	610	Ida	12 W	503	5306	2668	92
	310			257	4566	1173	46
	300		13 W	428	4579	1959	81
	850		14 W	121	2288	2537	1
	1	Bot	12 W	659	4279	2619	86
	940			1040	4123	4287	92
Old Carb Slope Fill				9998	7875	7873	52
Carbonado Dump				25507	3822	9748	75
St	140	CARB	8 E	80	6072	4857	6
	600			1817	24097	49788	24
	800			1210	11407	13802	47
	900			3044	12353	27602	53
				44667		285090	95
Jungsten Ore Inventory							
Rs	400	Ida	14 E	112 tons @ \$32.50	\$3640	Gross Value	

Silver Bell Mill

New
Improvements

Cont
Operation

~~\$65,321.80~~

~~\$63,625.53~~

Bell 4.7.96%

\$30,349.93

Carb 52.04%

\$32,930.75

\$6,532.18

63,279.68

Silver Bell Mine

Operation

New Coat

\$22,265.65

\$37,398.48

971.93

219.51

88.32

2349.10

3004.53

88.41

53.01

\$60,355.57

30,348.93

\$90,704.50

\$5,583.37

Carbonado Mine

69014.57

33020.13

55637

118967

12793

8903.27

55499

Total DMFA Cost

\$14,546.90

Less Labor

\$903.27

\$5,643.63

102,034.70

32,930.75

\$134,965.45

5643.63

\$11,332.23

5643.63

\$5,643.63

\$129,321.82

\$16,975.86

Assessment Work

CHEV 019303

Assessment Work

CHEV 019304

Garçon

Labor	Prod	Dev	N/Const	Exploration
J	2373 67	125 73		353 50
F	2153 57	3480 80		353 50
M	733 61	2075 46	4476	365 50
A	1537 86	1800 75	4286	13 67
A	1636 77	1972 51	188 45	
M	2776 83	911 75		
M	3195 88	4070 7	69 28	
J	5569 35	2501 12		
J	3601 83	1994 81	128 67	
A	3884 13	2026 11		
S	4781 47	484 47		103 50
O	5092 72	388 05		
N	5591 82	1154 77		
D	5489 55	1911 62		
	4841 78	2076 502	47402	1189 67
Mat/Inv				
J	474 21	26 17	502	
F	1083 42	1751 28		
M	373 71	1377 68		
A	768 41	1255 88		
M	2008 30	602 36		
J	11508 42	1242 49		700
J	1175 59	1065 53	41 81	
A	384 43	211 13		
S	455 41	185 74		
O	1025 41	789 6		
N	1385 00	470 75		
D	874 23	277 27		
	11557 62	8545 24	46 83	700
Exp/Inv				
J	1027 15	54 46	670	
F	274 44	446 83		
M	170 25	504 67		
A	342 91	356 63	581	
M	638 27	140 20		
J	724 64	542 66		30 20
J	550 67	463 07	201	35 42
A	662 43	345 52		30 84
S	1050 03	106 39		2 50
O	1322 80	101 56		7 02
N	989 10	204 32		14 75
D	1273 68	443 56		
	9037 07	3707 87	1552	120 93
	6901 457	33020 13	55437	1187 67
				12773 *

CSM. Geology

Operation *Drift*Vein *Carbonaceous*Level *8E*

By

Date	Sample No.	Width Tons	Width	Width	Width	Width	Width	ASSAYS				
			Au x	Ag x	Pb x	Zn x	Cu x	Oz. per ton		Percent		
			Tons	Tons	Tons	Tons	Tons	Au	Ag	Pb	Zn	Cu
1952 Aug	1402	62	0.31	223.20	5890	43.40	49.60					
9		76	0.38	91.20	26.60	15.20	19.00	0.005	3.60	0.95	0.70	0.80
19	1908	92	1.80	552.00	657.80	174.80	193.20	0.005	1.20	0.35	0.20	0.25
26	1917	230	2.53	866.40	743.30	233.40	261.80	0.02	6.00	7.15	1.90	2.10
Sept 24	3090	158 1/2	2.415	120.35	381.80	66.40	16.60	0.005	1.45	9.60	0.80	0.20
3 Oct.	3052	34	0.68	115.60	40.80	11.90	8.50	0.020	3.40	1.20	0.35	0.25
18 Oct	3066	181	0.905	162.90	416.30	126.90	27.15	0.005	0.90	2.30	0.70	0.15
		215	1.585	278.50	957.10	138.60	35.65					
2 Dec	3148	74	0.74	351.50	843.60	155.40	14.8	0.010	4.75	11.40	2.10	0.20
		74	0.74	351.50	843.60	155.40	14.8					
8 Dec	3159	66	1.320	273.90	250.8	69.30	33.00	0.020	4.15	3.80	1.05	0.50
		66										
2 Feb 53	3168							0.005	0.35	0.35	0.25	0.08
10	3175	83	0.83	219.95	182.60	66.40	16.60	0.01	2.65	2.20	0.80	0.20
14	3196	68	0.34	112.20	88.40	23.80	3.40	0.005	1.65	1.30	0.35	0.05
		151	1.17	332.15	271.00	90.20	20.00					
			0.008	2.200	1.795	0.597	0.132					

By

SE

Level

Case

Vein

3700

Operation

Date	Sample No.	Width		Width		Width		Width		Width		Width		Oz. per ton		ASSAYS		
		Au x	Tons	Ag x	Tons	Pb x	Tons	Zn x	Tons	Cu x	Tons	Au	Ag	Pb	Zn	Cu	Percent	
19 Nov 37	3119	2.46	173	405.90	100.10	100.10	296.95	246.0	6.020	3.30	8.70	2.25	0.20					
17 Nov 37	3173	1.36	136	33.80	58.50	58.50	20.80	3.90	0.010	2.60	4.50	1.60	0.30					

By

Date	Sample No.	Width Tons	Width	Width	Width	Width	Width	ASSAYS				
			Au x	Ag x	Pb x	Zn x	Cu x	Oz. per ton		Percent		
			Tons	Tons	Tons	Tons	Tons	Au	Ag	Pb	Zn	Cu
19 Nov	3118 #9							0.0025	1.10	1.10	2.85	2.08
	3115 ¹							0.0025	0.45	0.55	0.35	0.04
	3111 ²							0.005	1.70	1.90	0.25	0.05
	3114 ⁶							0.005	0.50	2.10	2.85	2.06
Average Body =								0.00375	0.938	0.913	0.50	0.058

RESPONSE 10

Memorandum
union
MOLYCORP
Los Angeles

In Reply Give No.
MEA-80-141

September 5, 1980

TO: H. M. Rainey
FROM: N. Kurai

Not

Reclamation Costs at the
Ophir, Colorado Property

In response to your request of September 4, 1980, I have prepared the following rough estimate of reclamation costs at the Ophir, Colorado property.

The area of immediate concern is the mill tailings. I estimate initial reclamation will be approximately \$100,000 and annual maintenance will be about \$5,000 per year for two to five years until the ponds are stable and self-sustaining.

The State of Colorado is studying methods for controlling discharge from Carbonaro mine. Although we are not currently under any obligation to control the discharge or reclaim the damage caused by it, the potential exist that we may be forced to deal with the problem in the future. A rough estimate of cost associated with stabilizing the steep side cuts in the gulch caused by the Carbonaro mine wash-out of a few years ago is \$50,000, but may well be many times this amount. I do not believe we can effectively control the actual flow.

I am not familiar enough with the other properties to venture a guess of what may be required.

If you have any questions about the figures supplied, please contact me.

NK:jb



MEA80-112

In Reply Give No.

June 30, 1980

To: H. M. Rainey

From: Noel Kurai

OPHIR, COLORADO: MILL TAILINGS
& CARBONARO MINE WATER DISCHARGE

On June 25 and 26, 1980, I made a visit to the Ophir, Colorado property. The site visit was to observe the mill tailings and the water discharge from the Carbonaro mine.

Ophir Mill Tailings

Conditions agreed to in the Ophir National Pollution Discharge Elimination System (NPDES) permit for the tailings, originally obtained by Silverbell, called for reclamation of the Ophir mill tailings. Molycorp assumed the NPDES permit when it acquired the property.

The mill tails were reported by Les Smith to cover about 3 acres. I would estimate that the tails actually affect 10 to 20 acres. The sides (dams) are composed of a medium sand, with a soil pH of about 4-6. Some shrubs and grasses are growing in a few acres. The center of the main tailings pond is composed of fines (similar to clay in texture) and have a pH of <4. No vegetation was observed growing on the main tailings. On the lower tails, some grasses, shrubs, and aspens were observed to grow in soils of pH <4. Water ponded on the lower tails with a pH <4 has some vegetation (possibly a type of rush) growing in it.

I suggest the following reclamation activities be implemented:

1. Have a reclamation specialist make a site visit and make recommendations for possible reclamation work. This should be done immediately. Estimated cost is \$2000.
2. Establish a series of plots to test the recommended reclamation methods. This should be implemented this fall.
3. Determine the best method and complete reclamation. This should be done in one to two years.

Ophir, Colorado: Mill Tailings
& Carbonaro Mine Water Discharge
June 30, 1980
Page Two

Carbonaro Mine

Early this month Les Smith was contacted by the Forest Service (F.S.) regarding water discharging from the Carbonaro mine. The Fish and Wildlife Department had contacted the F.S. about making fishery improvements on the South Fork of the San Miguel River. Proposed improvements on the South Fork would include stream bed improvements and tree planting. However, the Carbonaro Mine discharge water periodically causes large amounts of silt to enter the river suffocating fish. The F.S. wanted to see if a means to stop this silt discharge could be found.

Les Smith was contacted independently by the Regional Planning Commission (Region 10) which is involved in a study with the Colorado Department of Health to identify water quality problems associated with abandoned mines in Colorado. From this study mitigation plans will be developed and funds sought under a Federal program to clean up abandoned mines.

Les Smith and I arranged to meet with the two groups to discuss the problem and tour the Carbonaro Mine area on June 27. The following individuals were in attendance:

1. Floyd Howard - Norwood District Ranger;
2. Dick Cook - Norwood District Ranger;
3. Jerry Hodges - Norwood District Ranger;
4. Keith C. Kepler - Water Quality Program Director,
District 10, Regional Planning Commission;
5. Don Simpson - Water Quality Control Division,
Colorado Department of Health;
6. Chris Crandell - McLaughlin Industrial Waste Engineers
(Consultant for the study);
7. Tom Hale - San Miguel County Commissioner;
8. Les Smith - Molycorp;
9. Noel Kurai - Molycorp.

The problem appears to be that the Carbonaro Mine discharges to a very steep mountain side composed of loose gravels and silts. The mine water along with water from other natural sources, has cut a deep gully into the mountain side. The steep sides of the gully continuously erode into the creek causing a high silt load. A few times a year, failure of the gully walls causes the discharge to be temporarily dammed. The dam fails and an unusually large amount of silt enters the main river, resulting in fish kills.

Ophir, Colorado: Mill Tailings
& Carbonaro Mine Water DMScharge
June 30, 1980
Page Three

Chris Crandell took samples at the Carbonaro Mine water discharge and he informed me that samples were obtained at several locations downstream. Additional samples will be obtained later this summer and again this fall. Analysis will include metals, suspended and dissolved solids, conductivity and pH.

Certain flaws were observed with the sampling method used by the consultant. These flaws include:

1. pH was not measured on site, pH of the water varies with temperature and may change rapidly once the water is removed from its source; and
2. the water was not filtered prior to acidifying it, metals present in the silt or sand particles will be dissolved and erroneous concentrations detected.

The FS has decided to wait until the Department of Health completes its study and makes its recommendations before implementing fishery improvements. The study should be completed this winter and the recommendations completed next spring.

I recommend the following actions:

1. begin a water sampling program immediately;
2. follow the work being done by the Department of Health; and
3. share information and become involved with development of Department of Health recommendations.

The estimated cost of water analysis would be about \$1500.

Summary

The following actions should be taken this year:

1. Have a reclamation specialist take a look at the Ophir mill tailings and recommend reclamation measures;
2. Begin testing reclamation methods;
3. Begin a water quality study in the Carbonaro and Ophir area.

The cost would be about \$3500 to \$5000 this year. We should begin work immediately since it should all be completed before winter.

NK/st

cc: Walt Garza
Bill Moran
Gene Lindsey

XL sent to Mr. Bennett
4-11-79

union

RECEIVED

APR 16 1979

06 April 1979

EHE	
WRM	<input checked="" type="checkbox"/>
REB	
FHB	
WHG	
WCG	
EHL	
RRW	
GEM	
DMC	
JRM	
HMR	
LER	
EW	
ALL	

TO: E. H. Lindsey

FROM: W. G. Zinn *W.G.Z.*

SUBJECT: Ophir, Colorado

Attached please find a memo from Mark Koestel and Gordon Gumble on our understanding of the Ophir property, San Miguel, Colo. As you will read, the Ophir properties are a real nightmare and a decision is needed very soon as to what will be done on the disposition of these properties. It is my opinion and recommendation that we dispose of the Ophir properties by dropping claims on which we can legally do so and negotiate, or if necessary, purchase our way out of the option claims. Negotiations could follow the basic outline in Koestel's and Gumble's memo, e.g., Item II, page 1. I believe you indicated that Gene Sanders would be willing to take on any of the old Silver Bell properties which Minerals Exploration Company would wish to drop? This possibility would be another way out of the Ophir problem for us. At any rate, a decision must be made on this matter within the month or major problems with potential assessment work will occur.

I would appreciate your expediting this matter and notifying me of the outcome at your earliest convenience.

WGZ:sg

cc: W.H.Garza
W.R.Moran
H.M.Rainey

attch.



04 April 1979

TO: W. G. Zinn *jel*
FROM: G. E. Gumble and M. A. Koestel *Mark*
SUBJECT: Ophir, Colorado

The Ophir, Colorado property has been the subject of a recent Minerals Exploration Company geological report, as well as numerous recent discussions. An unfavorable geological setting augmented by a complex, problem riddled land status and potentially expensive environmental commitments make it advisable to relinquish this property as soon as possible. Recent conversations with yourself and others have formulated the following suggestions to facilitate relinquishment:

1. Since E. H. Sanders, the former owner of Silver Bell Industries, Inc., has expressed an interest in acquiring any portion of the Ophir property that we do not want, the simplest course of action would be to give everything back to him. Hopefully, he would not only take it back, but would also take over the outstanding property payments.
2. The inherited commitment of property payments to Baumgartner, Belisle and Pullman could possibly be dissipated by offering them a substantial fraction of the outstanding payments as inducement to allow us to immediately return their properties. Should this course of action fail to interest them, we could offer an additional bonus of the remaining unpatented claims, rather than simply dropping them. Finally, if the foregoing inducements fail, we should seriously consider giving them all of their outstanding payments as a single advance payment and return their property. In this case, the remaining unpatented claims should be dropped and the remaining patented claims retained.

If commitments to Baumgartner, Belisle and Pullman cannot be severed, we may have to conduct a minimal 1979 field program designed to satisfy assessment requirements. Any minimum program should assume the western block of erratically distributed unpatented claims will be dropped. The millsite on which Les Smith's buildings are located may have to be retained. The unpatented eastern block of claims that we may be committed to do assessment work on includes 37 "Ruth" claims, 93 "Ophir" claims, 8 "Black Jack" claims and 5 "Arrow Head" claims. All 143 of these claims would require a minimum expenditure of \$14,300. We control several groups of unpatented claims in the vicinity of the Carbonero mine that are adjacent to the eastern block and could be validated for another year at an estimated cost of \$2,700 - bringing the total 1979 expenditure to \$17,000.

In spite of the Ophir property's low potential for significant mineralization we should design an assessment work program that would contribute as much as possible to our further understanding of the property's geological setting.

Evaluation of the molybdenum and precious metal potential of the property could then be enhanced. Therefore, the following work should be considered for inclusion in a minimum 1979 field program:

1. Geological mapping and geochemical sampling in the area between the New Dominion mine and Carbonero millsite. In addition to rock chip sampling, certain areas could be soil sampled using a close interval grid designed to detect base metal - precious metal veins which strike east-west.
2. Geological mapping and geochemical, as well as channel sampling of the middle level of the New Dominion mine which is accessible.
3. Geological mapping and geochemical, as well as channel sampling of the upper level of the New Dominion mine which is dry and accessible. In this case it would be necessary to set timbers in many areas with loose ground and perhaps remove some amount of fallen rubble.
4. Geological mapping and geochemical, as well as channel sampling of the lower level of the New Dominion mine. In this case, the portal is almost completely collapsed and would have to be opened and rehabilitated. Since the lower portal is discharging water, discharging effluent would have to be dealt with and the ribs may require extensive cleaning. A discharge permit requiring up to 90 days for approval may also be necessary. The lower level is a north trending cross-cut and it may not yield as much information as suggestions 2 and 3.
5. Geological mapping and channel sampling of the lower level of the Silver Tip mine. This would require extensive cleaning of the ribs which might involve a discharge permit since the mine is very wet and there is a constant discharge of water from the portal.
6. Geological mapping and geochemical, as well as channel sampling of the upper level of the Silver Tip mine. The upper portal is collapsed and discharging water. Entry would probably require about the same amount of work as the lower level of the New Dominion mine (described in suggestion 4).
7. Drill an 850 foot core hole near the New Dominion mine or the Carbonero millsite. If these sites are discovered to be legally unacceptable, then a site east of the Silver Tip mine could be selected.

Rather than utilize our staff evaluating a property with relatively low potential it would be prudent to hire a contractor to accomplish the necessary assessment work. If a contractor is chosen to do the work, then one or more drillholes would probably constitute the most expedient 1979 program.

Before the exact nature of the work to be included in any 1979 Ophir field program can be determined, we must first learn exactly where the work can be executed. There are, unfortunately, a number of unknown variables concerning or related to the land status. They include, but are not necessarily limited to the following:

1. The area between the New Dominion mine and Silver Tip mine is geologically the most interesting and should be where we concentrate additional

work. However, this is the area where we have the least control of the land. The claims we do control are probably not legally contiguous with the main eastern block because of the location of the patented "Parnell" and "Iron Spring" claims. Knowing whether or not this area is contiguous with the main eastern block is crucial. If it is not contiguous we must expend most of our efforts in other areas that have almost no redeeming qualities whatsoever.

2. If the claims near the New Dominion mine are not considered to be contiguous with the main eastern block, then numerous similar isolated blocks almost certainly exist south of the Ophir townsite. Proper validation of these blocks or claims could be a serious problem because their locations are extremely difficult to establish. Drilling, with the possible exception of a "pack sack" drill, would probably not be a feasible method for executing a work commitment.
3. The lower and upper portals of the Silver Tip mine, as well as most of the lower cross-cut are probably on Pfizer Corporation's property. Do we have the right to enter the lower and upper portals of the Silver Tip mine? An agreement between Pfizer Corporation and Silver Bell Industries, Inc. reportedly exists that would give us that right. However, we should find this agreement - if it exists. An additional potential problem exists regarding the discharge from these two portals. If we contaminate the discharge in a manner that causes it to be regarded as effluent (requiring a discharge permit), then we will be discharging onto Pfizer Corporation's property.
4. While probably not influencing decisions regarding assessment work, the location of all the unpatented "Arrow Head" and "Black Jack" claims is not firmly established. Existing information should be augmented in order to be more certain of their locations.
5. A special problem with unknown ramifications exists with the "Silver Bell" claims overlying valid(?) "Ophir" claims in the southeastern corner of the main eastern block. Do they exist for a particular reason or can they be dropped?

This memorandum has pointed out the kind of assessment work we could do on the Ophir property in 1979 and listed some of the unknown variables that might effect where the work is accomplished. There are still other factors that could influence the kind of work we can do on the property. Federal law prohibits using geological mapping, geochemical sampling or geophysical surveys to satisfy assessment work for more than 5 years and for more than 2 consecutive years. Assessment work records should be checked to determine if we can even use these methods in 1979. Mapping and sampling underground might be an exception to any rules applied to the surface. A determination regarding this possibility should also be made. An additional determination should be made regarding the opening, timbering and cleaning of the old mines.

GEG:MAK:sg

Memorandum
Union Oil Company of California



28 March 1979

TO: G. Zinn *Mark*
FROM: M. A. Koestel and G. E. Gumble *GEG*
SUBJECT: Ophir, Colorado

Per your request for options on the 1979 field program for Ophir, San Miguel County, Colorado, the following list outlines three basic "courses of action" that could be followed. Comments, questions and suggestions follow where appropriate.

- I. Considering our geological disinterest in the Ophir property and that Gene Saunders has allegedly said that he would take back any claims which we do not want, the simplest course of action would be to give everything back to him. However, this may not be realistic.
- II. It may be possible to fulfill our commitments to Randolph Belisle, John Pullman and Franklin Baumgartner by paying them 2/3 of the agreed total purchase price and giving the property back. This may be a more negotiable plan and allow us to divert our interests to more geologically favorable areas.
- III. If, due to prior commitments, we do further geological work in Ophir, then a minimum field program would be the geological mapping and geochemical sampling of the Spring Gulch area and underground in the New Dominion and Silver Tip mines. However, these actions alone would not fulfill the estimated \$30,000 that must be spent in order to do next years assessment work.

In order to accurately determine our legal obligations as to what must be done and where, the following is a list of ideas and questions that must be answered before further work can be carried out:

1. The exact location of all claims must be determined. Some claims (blocks?) are believed to be as much as 1,000 feet off. Claim posts are virtually non-existent.
Determine which claims are patented and which are unpatented. Patented claims need no work.
3. Ascertain the true boundaries of the claims owned by Pfizer, Inc. since this is a key piece of land (encompasses the Silver Tip mine).
4. Because of the "piecemeal", scattered nature of Silver Bell Industries' claims west of the Ophir townsite, all of these can be dropped.
5. Further mapping and geochemical sampling may not count as assessment work since a total of 5 years with 2 consecutive years of survey-type work (geological, geophysical and/or

geochemical) may have already been done. This is a Federal law and must be researched further. This includes work done by Baumgartner and Union-Minerals in some circumstances.

6. Does Union-Minerals have the legal right to enter the Silver Tip mine on Pfizer claims, as is supposedly the case as stated in a letter to Melvin Carlson from Pfizer? (The whereabouts of this alleged letter is not known.)
7. Is the upper level of the Silver Tip mine (collapsed) on Pfizer or Silver Bell's claims? Again, boundaries must be ascertained.
8. The minimum number of unpatented claims that we are committed to do assessment work on are 37 "Ruth" claims, 93 "Ophir" claims, 8 "Black Jack" claims and 5 "Arrow Head" claims, for a total of 143 claims (\$14,300).
9. There are several groups of unpatented claims in the vicinity of the Carbonero mine that can be included in the 1979 assessment work of these purchased claims. This could cost an additional \$2,700 for a total of \$17,000.
10. A special problem exists with the "Silver Bell" group in the southeastern corner of the "Ophir" claims. These overlap the already valid "Ophir" claims. Do they exist for a special reason or can they be dropped?
11. All millsites in the Howard Fork Valley could be kept for strategic importance.
12. Must we control the patented "Parnell" and "Iron Springs" claims in order to have continuity of our claim blocks? If construed to be contiguous, then drilling would validate all claims. This also applies to the area south of the cemetery.
13. If our claim blocks are contiguous, can we do geology and geochemistry by the cemetery (geologically the most favorable area) to validate all claims?
14. Ascertain which millsites belong to Union-Minerals.
14. Opening of the Silver Tip and New Dominion mines counts as assessment work. But does the subsequent underground mapping and geochemical sampling count when considering the Federal limitation of 5 years with 2 consecutive years of survey-type work (geological geophysical and/or geochemical)?

A fourth category is possible. If as much geological information as possible is desired for our money, then in addition to the aforementioned ideas and questions that must be answered, others should be considered.

To assess the molybdenum and precious metal potential further, and to do the necessary assessment work for 1979, the following ideas are set forth:

1. Opening of the collapsed Silver Tip mine. However, the portal is

probably on Pfizer's claims, hence permission must first be obtained.

2. The effluents from the Silver Tip mine, including the prospective opening of the upper level, will discharge onto land other than our own (Pfizer). Therefore, we must first get permission from Pfizer to allow this. Also, permits must be purchased, which take 90 days to obtain.
3. Stake open ground near the Ophir cemetery. This would require approximately 5 claims.
4. Core drilling of the most geologically interesting area, which is by the New Dominion mine and the Carbonero millsite. A firmer land position is desirable and further staking of open ground to the west and south is recommended.

The entire cost of claim validation could be achieved on just this one hole. Assuming an average cost of \$20 per foot, a strategically placed 850 foot hole could validate all contiguous claims. This would amount to \$17,000.

5. Grid soil sampling by the Carbonero millsite and analysis for Mo, Sn, Ag and Bi. Does this count toward assessment?
6. Do any of the millsites in the Howard Fork Valley compliment our claim blocks to the east? If so, is it legal to re-file the millsite that Les Smith's house is on? It could be argued that the millsite is in support of these eastern claim blocks.
7. The upper levels of the New and Old Dominion mines could be revitalized for safe entry. Shoring of the portal and entire tunnel would validate all contiguous claims, provide safe entry for underground mapping, sampling and assessment of precious metals potential, and possible cost close to the figure needed for total assessment work (\$17,000). This work would require no discharging of effluents since these levels are dry.
8. Opening of the New Dominion crosscut would require a discharging permit (90 days for approval), but effluents would be discharged onto our claims.

OTHER THOUGHTS

1. An excessive amount of money would have to be spent on geochemistry if this were the only means used to do the 1979 assessment work on the Ophir property. Therefore, geochemistry in conjunction with mine revitalization or drilling is recommended.
2. A "bare-bones" type approach to this property and its claims would be to drop everything except the "Ruth", "Ophir", "Black Jack" and "Arrow Head" claims. A drill hole 715 feet deep would satisfy the 1979 assessment on these 143 unpatented claims (assuming approximately \$20 per foot=\$14,300).

Whether or not our prior commitments will allow us to do this must be ascertained.

3. For an individual or small mining company, there may exist a precious metal potential. East-west vein systems that "pinch and swell" may contain high grade pockets of precious metal mineralization. However, for a large company such as Union-Minerals, this is not a large enough occurrence to even be of consideration.
4. The Ophir property does not appear to be a favorable molybdenum target since silicic-alkalic rocks are not present. Further work is not recommended unless necessary and a rating on a scale from one to ten would probably be 2 or 3.

MAK:sg

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FEB 12 1979

Memorandum

Union Oil Company of California

union

06 February 1979

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TO: All Interested Readers

FROM: W. G. Zinn *WGZ*

SUBJECT: Comments on the Geological Report on Ophir, Colorado by
Gordon E. Gumble and Mark A. Koestel

The attached geological report on the Ophir properties in San Miguel County, Colorado represents a thorough geological and geochemical reconnaissance study by Gumble and Koestel in a relatively short period of time. The properties were investigated and evaluation was made in such a manner to determine our future interest in these properties. To that end we recommend that no further geological work be done on these properties. We feel confident that the molybdenum potential is sufficiently poor that we are recommending disposing of the Ophir properties. On a scale of 1 to 10, the Ophir properties in the Colorado Mineral Belt would fall in the 2 to 3 category for molybdenum. Should Los Angeles management wish us to proceed with a further evaluation, two programs have been outlined in the report to that end.

Reference is made to my memo (attached) of 11/8/78 to G.C.Dohm, Jr., on the Ophir property consisting of 3 environmental and safety hazards for which Minerals Exploration Co. may be legally responsible. To my knowledge to date, consideration has yet to be given these hazards. We are formally requesting that the responsibilities concerning these possible hazards be taken over by the Los Angeles office.

It is my belief that the work done on this property by Gumble and Koestel represents a quality effort and should any questions arise, either myself or the co-authors are available for discussion on any aspect of the report.

WGZ:sg

Memorandum
Union Oil Company of California
union 76

08 November 1978

TO: G. C. Dohm, Jr.
FROM: W. G. Zinn *WZ*
SUBJECT: Ophir Property, San Miguel County, Colorado

The following is a proposal for work on the Ophir property for 1979 consisting of needs for which I am requesting advisory help from the Development Group. Several of the contemplated tasks mentioned, stem from suggestions made in John Roberts report of 9/18/78 on this property. All work described in this memo is made with the assumption that Union Oil acquires the properties from Silverbell Industries. There are six specific projects listed below which need our attention in 1979.

The first item to be considered by Minerals Exploration Company is our responsibility for stabilization of the tailings from the Silverbell Mine. It is my understanding, based on conversations with Mel Carlson and Les Smith (Silverbell employees) that Silverbell Industries had an agreement with Colorado-Utah Power Company to place tailings on the power companys land below the mine. Should Minerals Exploration Company acquire Silverbell, we then may be responsible for stabilization of the tails. Typical of old mining camps, the tailings are in a deteriorated condition and need attention. In addition, the tails are at the headwaters of the South Fork of the San Miguel River where the Howard Fork and the Lake Fork join. In my opinion, we should be prepared to take corrective action on the tailings if we are legally liable, and before we are required or ordered to do so.

The second need on the Ophir property has to do with various mining structures on the property such as dump ramps and various building sites (the Carbonero mill) on company-owned property. These structures are in poor condition and pose a hazard to the many tourists who visit the area during the summer months. It is suggested that the structures be destroyed to eliminate possible law suits against the company.

Similarly, numerous adits and possibly some shafts exist on the property of which some are open or partially accessible. These also pose a liability to the company due to the many tourists in the area. It is recommended that after geological evaluation these adits and/or shafts be securely sealed to eliminate this hazard and protect the company.

The fourth task we believe necessary to evaluate the geological potential of the area for a possible molybdenum deposit, is opening of the upper portal of the Silvertip adit. We would like this done next year so we can collect geochemical and geological information from the adit. John Roberts, on page 11 of his report, has given us a cost and time estimate to open this adit.

The fifth item we feel is necessary has to do with environmental considerations due to the sensitive area that the claims are in. We feel that to guarantee our further exploration efforts in the area in 1979 and later, that possibly four permits may need to be investigated and possibly secured. If required, these permits should be applied for and approved before any drilling, opening of adits or other physical work in related exploration efforts, are done next year. The permits in question are as follows:

11/8/78

1. A prospecting permit through the Colorado Mine Land Reclamation Board.
2. The EPA, National Pollution Discharge Elimination System (NPDES) permit.
3. The USFS Plan of Operations.
4. The Colorado Air Pollution Control Board has recently proposed revised air quality regulations, and should be investigated for compliance.

The last item necessary is for environmental considerations and has to do with a base line water analysis program. As you know, Terry Larson started a base line water analysis program during this past year in the project area. It is felt that this program should be continued and perhaps be expanded to give us a sound base for environmental consideration in future years. This program will be of particular use for the tailings problem and to monitor change in the water in our closing and opening any of the existing adits.

Realizing the above documentation is very general and needs Los Angeles' approval before we mount efforts on any of the six programs, I would appreciate your and your staff's appraisal of the needs and costs to accomplish the six projects outlined. In addition, comments on your group's availability to direct or supervise these tasks is also solicited. Possibly a meeting can be scheduled to discuss these projects and related problems in the near future at your convenience.

WGZ:sg

cc: D.T.Arrieta
F.H.Buchella, Jr.
G.E.Gumble
E.H.Lindsey
W.R.Moran

Memorandum
Union Oil Company of California
UNION

16 November 1978

TO: Mr. Zinn
FROM: G. E. Gumble *GEG*
SUBJECT: Ophir Water Quality Samples

Fifteen water samples were collected throughout the Howard Fork Valley (Ophir), Colorado on August 23, 1978. A rain of moderate intensity, lasting for approximately an hour, had fallen on the preceding day, but turbidity induced by this rain had dissipated by the time of collection. The sample sites were chosen to serve for water quality analyses and geochemical exploration. An acidized (dilute nitric acid) and unacidized 500 ml plastic bottle of water was collected at all sample sites. An additional unacidized 500 ml plastic bottle of water was collected at three sites in order to insure adequate volume for the analysis of numerous constituents. The nine bottles representing the three high volume (1500 ml) water samples were refrigerated, but the others were just kept as cool as possible. Water temperature, pH and hardness were not determined at the sample sites.

A significant quantity of the water in the Howard Fork (of the San Miguel River) emanates from the mouths of old adits. Swamp Creek and Waterfall Creek may be the only major tributaries where the bulk of the water originates normally. Ground water descending from the upper slopes of most of the remaining drainage area often returns to the surface through natural springs and seepage areas located in colluvium/fanglomerates along the lower slopes. These springs and seeps were probably much more common or larger before the advent of mining activity which diverted the discharge of considerable ground water to the mouths of adits. The present ground water - surface water configuration in the Howard Fork Valley makes it reasonable, perhaps even necessary, to evaluate streams and adit discharges collectively.

Most of the rock units exposed in the Howard Fork Valley contain disseminated pyrite and a pyrite content of 3-5% (volume) is common. Consequently, one would assume acid ground and surface waters are common throughout the valley. Surprisingly, only 6 of the 15 water samples are acidic and of the acidic 6 only 3 (all collected at adit mouths) are acidic enough to be worrisome (pH 5.05-5.27). Immediately downstream from these low pH discharges the Howard Fork is neutral (pH 7.09). Further downstream it becomes progressively alkaline. Upon merging with the main fork the pH of the stream has risen to 7.96. Also somewhat surprising is the overall quality of the water. Undesirable elements/compounds are not present in toxic quantities and very few constituents occur in concentrations exceeding 1 ppm. Most of the constituents that occur in concentrations exceeding 1 ppm simply make the water "hard".

Visually, the water being discharged from adit mouths appears contaminated to an alarming degree. In actual fact, however, most and probably all of the unsightly effect is due to large quantities of ferric hydroxide. Nearly all of the ferric hydroxide "settles out" of the water very quickly and, with very

little doubt becomes the agent which cements much of the colluvium/conglomerate on the lower slopes of the valley and on the valley floor. These cemented colluvial deposits are usually referred to as "ferricrete". The portion of the valley floor which receives the most acid waters is known locally as the "Iron Spring" and the surrounding area has such a thick, completely developed ferricrete deposit that it is referred to as an "iron bog". Prior to mining activity in the valley the Iron Spring really was a spring, however, most of the acidic water now entering pools in the iron bog is discharge from the Silver Tip Mine and to some extent the Perry-Davis Mine. The formation (and subsequent destruction by erosion) of ferricrete has obviously been occurring for a long time and the relatively recent mining activity cannot be blamed for its creation. In fact, it could be argued that mining activity has curtailed the development of the ferricrete. Unfortunately, mining activity has provided the roadcuts and surface exposures which reveal the ferricrete and associated iron bog. Some people believe they are unsightly and even conclude, erroneously, they are the product of the mining activity.

The relatively good quality of the water sampled contradicts its unsavory appearance and the observation that most mine water discharges in other districts are heavily contaminated. This contradiction requires an explanation. Understanding any explanation requires a rudimentary appreciation of some of the rock units in the Howard Fork Valley. The lower slopes and valley floor are conveniently underlain by a nearly flat lying arkosic formation about 300 feet thick which has been intruded by a quartz-feldspar porphyry. Both rock units contain considerable feldspar and the arkosic zones, as well as the contact zone between the arkose and porphyry, are thoroughly fractured. Additionally, most of the mining activity in the valley occurred in close proximity to the contact zone between the arkose and porphyry. Extensive areas of partially developed ferricrete, as well as older ferricrete (now being eroded) correlate closely with areas underlain by arkose and porphyry. Descending acid ground water containing dilute sulfuric acid and simple (presumably) metallic cations thus encounters a permeable zone (the fractured arkose) which provides a path to the surface. While passing through the permeable zone large quantities of basic material (feldspar) are exposed which partially or even completely neutralize the originally acid ground water. Most of the streams and seep discharges sampled are actually slightly basic. Reaction of the solute with arkose and mine dumps leaches out large quantities of Ca, minor quantities of Na, Al, Mg and Mn and almost insignificant quantities of K and Fe. An argillaceous pervasive residue (often observable microscopically) remains that is probably capable of adsorbing, perhaps even absorbing, large quantities of cations. Ground water reaching the surface therefore contains only geochemically anomalous quantities of most cations and is characterized by large quantities of calcium sulfate, ferric hydroxide and (possibly) unassociated ferric iron. At some point during the neutralization process the ferric hydroxide is probably a negatively charged colloid, but this condition cannot last for very long. Cations that are not adsorbed by clays are probably scavenged from solution by the ferric hydroxide which causes the ferric hydroxide to lose its charge and flocculate. It is then deposited in the ferricrete. The details regarding the mechanism of deposition of ferric iron in the ferricrete are not well understood, but it is obvious that deposition does occur. The end result is water containing relatively little iron. It is doubtful that a significant reduction in calcium sulfate or colloidal(?) aluminum

11/16/78

occurs. Magnesium and sodium quantities appear to remain fairly constant throughout the valley (2-4 ppm).

In summary, acidic ground water (in the Howard Fork Valley) derived from dissociated pyrite is neutralized by alkalis derived from conveniently located feldspars and most undesirable cations accompanying the original acid water are adsorbed/precipitated as a minor constituent of the precipitated secondary minerals. The principal secondary minerals are clay which is a pervasive alteration (argillic) residue in arkose/porphyry and ferric iron which is deposited in the interstices of colluvium/conglomerates, thus yielding ferricrete and an iron bog. The foregoing hypothesis has been tentatively presented to explain the observed/analyzed facts and serve as a springboard for future investigation.

An evaluation-interpretation of certain geochemical parameters in the Howard Fork Valley surface waters and stream sediments has also been partially completed in order to assess water quality. Many of the sample sites can be abandoned in any future water quality sampling program, however, several new sites should probably be chosen. The list of constituents analyzed could probably be reduced and a longer list utilized only on a limited basis. A detailed discussion of geochemical stream water and sediment samples will be incorporated into a forthcoming geological report. A sample location map and tabulation of analyses will also be incorporated into the geological report.

GEG:sg

cc: H.S.Jacobson
M.A.Koestel
T.L.Larson
C.A.Oakley
B.K.Salisbury

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Memorandum
Union Oil Company of California
UNION

08 November 1978

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TO: G. C. Dohm, Jr.
FROM: W. G. Zinn *W.G.Z.*
SUBJECT: Ophir Property, San Miguel County, Colorado

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11/8/78

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3. The USFS Plan of Operations. *Posting of bond with USFS*
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WGZ:sg

cc: D.T.Arrieta
F.H.Buchella, Jr.
G.E.Gumble
E.H.Lindsey ✓
W.R.Moran

SILVER BELL INDUSTRIES'

PROPERTY REPORT

Ophir, Colorado

September 18, 1978

At the request of Mr. Glen Zinn, properties held by Silver Bell Industries near Ophir, Colorado, were inspected by Messrs. Arrieta and Roberts. Mines, mills, and tailings sites were examined as to their potential for mineral reserves, salvage value, environmental liability, and safety.

Ophir is situated in the San Juan Mountains of southwestern Colorado. Access is via Highway 77 from either Cortez or Montrose, Colorado. The area is ruggedly scenic, consisting of peaks reaching to nearly 14,000 feet and glaciated valleys. The alpine location coupled with a normally heavy winter snow pack supports several ski areas in the general area.

Mining activity in the area has been present since before the turn of the century. Early day ore was shipped via mule and railroad to Durango for smelting. Currently the nearest smelter would be in El Paso, Texas, or central Arizona. Previous mining interest has been centered on narrow vein deposits carrying lead and silver and zinc with minor amounts of gold.

Properties in the area held by Silver Bell Industries were operating during the 1920's and prior, and have seen intermittent activity through 1975. Generally income from the properties was scarcely sufficient to meet direct operating costs.

In the past Silver Bell Industries held a much better land position in the Ophir Valley but a dispute with the IRS resulted in the sale of claims containing some of the main vein structures. The principle example being the Silver Bell Mine of which Silver Bell Industries currently owns only the portal which is on an unpatented claim.

At present the surface facility of value is the Silver Bell mill and maintenance shops. Other mill and portal facilities in the area have value only as tourist attractions due to their age and state of disrepair.

Numerous adits and workings exist in the area but only those were examined which were of immediate interest to the exploration staff. Those examined include the Silver Bell, Carbonero, Silvertip, New Dominion, and Carribeau Mines.

SILVER BELL MINE

Surface facilities at the Silver Bell Mine include the only currently operable mill in the Ophir Valley. Wood structures inclose a small 100 tpd flotation circuit as well as a smaller gravity circuit used variously for gold and tungsten (hubnerite). 1975 saw the most recent use of the mill when it was used to treat ore from a small property near Rico, Colorado. An abbreviated list of equipment used in the mill includes:

- (1) 10x20 Pacific Jaw Crusher (primary)
- (1) 40" (approx) Spiral Classifier
- (1) 20" (approx) Spiral Classifier

- (1) 65 Marcy Ball Mill - Mine & Smelter Supply (100 hp)
- (8) Froth Flotation Cells - Lead Circuit
- (8) Froth Flotation Cells - Zinc Circuit
- (1) Disc Filter
- (1) Gardner Denver Vacuum Pump
- (1) 4x4 Ball Mill - Gravity Circuit

Mine Equipment Included:

- (1) Atlas Copco Air Compressor, recently acquired - no motor
- (1) Various Equipment - Sump Pumps - Ore Cars - Hoses - Wiring - Muckers - Locomotives, etc.
- (1) Melroe Bobcat Front End Loader
- (2) John Deere Track Type Front End Loaders (inoperable)

Mine facilities are in a greater state of disrepair than are the mill facilities. Due to the fact that no reserves for this mine are currently owned or controlled by Silver Bell Industries little attention was given to it and no attempt was made to enter it. During operations ore from the Silver Bell averaged 2-3 oz of silver and during exceptional months was sufficient to meet payroll. Overall, smelter receipts were sufficient to meet approximately one-half of the operating costs. At present the mine is partially flooded due to caving near the portal. Water outflow is clear and no iron staining is evident. Minimal problems should be encountered should it be decided to reopen this mine.

Tails from the Silver Bell mill are no longer on Silver Bell Industries' property due to the dispute with the IRS in

which the property was sold to Colorado-Utah Power Company. Silver Bell employees indicated that an agreement has been made with the power company under which Silver Bell Industries would stabilize the tailings area. It was felt that should Minerals Exploration Company acquire the property it would then become liable for stabilization of the tails. Samples of the tails were taken and returned to Tucson for testing, should it be necessary.

CARBONERO MINE

The Carbonero Mine is located midway up the valley and at an elevation of 11,480 feet. Access is via a "Jeep Trail" requiring fourwheel drive. Improving the road to any appreciable extent would be very expensive due to the steepness of terrain and the proximity of bedrock to the surface.

Mining at the Carbonero was conducted principally during the 1920's. Although undocumented, activity probably existed prior to the turn of the century. Most recently the mine was reopened for a couple of years during the early 1950's and mid 1960's. See attached production report.

1925 through 1931 seven levels above the portal at the 11,480' elevation were stoped out. The ore was a lead carbonate carrying silver values. Lower levels encountered increasing zinc values. Mining followed a narrow (12" avg) horsetailing vein structure. Ore was stoped out, hand sorted in the stope, lowered by hoist through a winze to the portal

level and trammed by cable to the Carbonero Mill which was located near the valley floor. During the 1960's stoping was completed on the portal level. No appreciable measured reserves remain on or above the portal level. Should future mining follow the vein to depth, increasingly higher zinc values might be encountered.

Surface facilities no longer exist and the portal is caved. Subsequent to the last mining activity a cave at the portal blocked drainage from the mine and backed water up into the old workings.

An attempt to reopen the portal resulted in the explosive release of the stored water. The massive outflow was sufficient to erode away nearly half of the mines waste dump and to permanently destroy the existing access road. A cyclic winter cave and plug followed by a spring blow out was ended when the county donated a culvert which was placed through the caved area allowing a constant flow through the portal area. Flow was estimated to be in excess of 300 gpm. Due to the large water flow and the iron staining occurring in this mine it is recommended the existing portal not be reopened due to environmental considerations. Should it be desired in the future to reopen the mine, a new portal should be developed and tied in to the old workings. This would require approximately 300 feet of crosscut.

The Carbonero mill site represents no more than a local

tourist attraction due to its poor physical condition. The original equipment has been salvaged leaving only deteriorating wood shell. Due to the heavy tourist traffic through the area (est. 50-100 cars/day) it is recommended that what remains of the Carbonero Mill be demolished before it collapses on a tourist and results in a lawsuit.

Additional information on this mine may be obtained from the Chase Report, Carbonero Mine, March 19, 1924, of which Silver Bell Industries has a copy. Original level maps are available from Silver Bell Industries or may be obtained in microfilm form from the Colorado Bureau of Mines.

SIVERTIP MINE

The Silvertip consists of two cross cuts driven in from the surface to intersect a vein. The upper crosscut was driven initially and some stoping along the vein structure was accomplished. The lower crosscut was an unsuccessful attempt to intersect the same vein. That they encountered a parallel structure is suggested by examining level maps. Very little stoping was done from the lower crosscut.

The upper portal was last opened in 1975, since then it has been closed by caving at the entrance. A small flow of water (<50 gpm) issued from the caved entrance.

Evidence of molybdenum mineralization in the ribs and back of the lower workings has created interest in reopening it for purposes of sampling the crosscut. The working seems to be in

reasonably good condition and should need no scaling or major timber repairs. Due to the high iron content of the surrounding rock 4"-8" of iron mud is present throughout. Where the workings drift along the vein, a 4"-12" accumulation of iron sediment is evident on all surfaces. This accumulation of iron presents the only obvious problem in reopening the workings for sampling. A water flow estimated at approximately 150 gpm originates along the vein and exits through the crosscut. Any activity within the workings puts iron-mud into suspension creating a bright red stream down the hillside. Should this suspended load of iron silt reach other flowing drainages a pollution problem would be created which requires a lengthy permitting process and raises the vocal ire of the residents in Ophir. Currently no problem exists in that during the dry season (late summer and fall) flow from the Silvertip is absorbed into coarse gravel sediments which filter the water before it co-mingles with local streams. Should it be desired to have activity in the workings during a wetter part of the year when co-mingling before filtration is a possibility, a small dam could be created where the crosscut intersects the vein and the flow channeled through a pipe past the area being disturbed by sampling.

NEW DOMINION MINE

The New Dominion Mine consists of three portals situated above one another. The upper portal drifts in along the vein structure while the two lower portals are crosscuts. The upper and mid

portals are open while the lower portal is partially closed with water standing at the back level (approx 6'). It appears that there is about a 3 foot depth of silt behind the caved area and which would have to be cleaned out to reopen the mine. Water flow from the lower portal is estimated to be approximately 150 gpm. Due to the water volume and silt load within this mine great care would have to be taken to prevent significant short term pollution of the Howard Fork of the San Miguel River.

The New Dominion Mill is located directly below the lower portal. Little of the mill remains but it appears to have been a gravity separation process. Currently the mill is being salvaged by an Ophir resident, Randy Belisle.

CARRIBEAU MINE

Land transactions have left Silver Bell Industries holding the vein structure for the Carribeau Mine but not access from the surface. Two portals have existed in the past but are now collapsed. An open portal which has access to the old workings exists on Dolores claim which is no longer held by Silver Bell Industries. Access to this mine is via "Jeep Trails". During its production period ore was trammed by cable to the valley floor.

Environmental Considerations:

In order to continue further exploration and claim validation work at the Ophir property next summer (May-Sept 1979)

several permits should be applied for and approved prior to any work such as drilling or placing a new adit in the area.

These permits are as follows:

1. Colorado Mined Land Reclamation Board, Propsecting Permit. Time to obtain permit is short and information required to complete the application is minimal.
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CARBONERO MINE

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Timbering portal	5,000
Cleanup with water hose	3/foot
Construct setting pond	4,000
Additional rental cost & Mobilization	3,000
Time estimate	2-3 mos

SILVERTIP MINE (Upper Portal)

Earthwork at surface	\$ 3,000
Opening caved portal	1,500
Timbering portal	2,000
Mucking out silt deposits	2,000
Cleanup with water hose	3/foot
Settling pond construction	500
Additional rental costs & mobilization	1,500
Time estimate	2-3 wks

NEW DOMINION

Earthwork at surface	\$ 2,000
Opening caved portal	2,500
Timbering portal	2,000
Mucking out silt	20,000
Cleanup with water hose	3/foot
Settling pond construction	2,000
Additional rental costs	1,500
Time estimate	3-4 wks

Costs assume an installed cost of \$400/set for timbering and that in all cases two miners would be employed at each active site.

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DA:TL:JR:mm
9/18/78

cc: G. C. Dohm
F. H. Buchella
J. A. Abramo
Glen Zinn

Attachment A:

SILVER BELL MINE		CARBONERO MINE
1952		
Ore Tonnage	82%	18%
Gross Value	60%	40%
1953		
Ore Tonnage	48%	52%
Gross Value	20%	80%

REPORT ON CONCENTRATE PRODUCTION FROM SILVER BELL
MINES COMPANY

<u>Year</u>	<u>Lot Numbers</u>	<u>Gross Value</u>	<u>Net Value</u>
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1953	Tungsten concentrate		\$6,622.63

Attachment B:

SILVER BELL MINES PRODUCTION FOR THE YEARS 1946 thru 1954

<u>YEAR</u>	<u>CONCENTRATE</u> <u>WEIGHT</u> <u>DRY TONS</u>	<u>GOLD</u> <u>OUNCES</u>	<u>SILVER</u> <u>OUNCES</u>	<u>LEAD</u> <u>TONS</u>	<u>COPPER</u> <u>TONS</u>	<u>ZINC</u> <u>TONS</u>
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1950	638.037	1,068.393	89,244.425	115.3480	29.6740	
1951	582.152	1,233.268	83,236.70	134.1954	34.6787	
1952	968.625	980.096	101,855.38	290.9619	57.6206	37.8450
1953	1,114.981	523.35	54,202.00	497.9800	27.3940	21.0510
1954	<u>1,440.504</u> <u>7,957.987</u>	<u>179.046</u> <u>7,836.874</u>	<u>35,475.42</u> <u>535,550.31</u>	<u>535.8196</u> <u>1,881.2029</u>	<u>16.3199</u> <u>254.3958</u>	<u>76.0259</u> <u>134.9219</u>

TUNGSTEN PRODUCTION

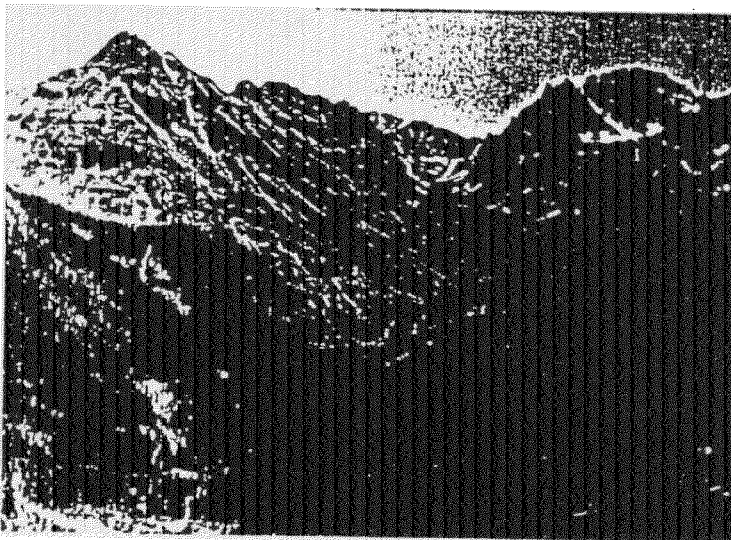
<u>1953</u>	<u>CONCENTRATE</u> <u>WEIGHT</u> <u>POUNDS</u>	<u>TUNGSTEN</u> <u>OXIDE</u> <u>POUNDS</u>
	3,893	2,264.69

Melvin Carlson, Engineer
Silver Bell Mines Company

OPHIR VALLEY

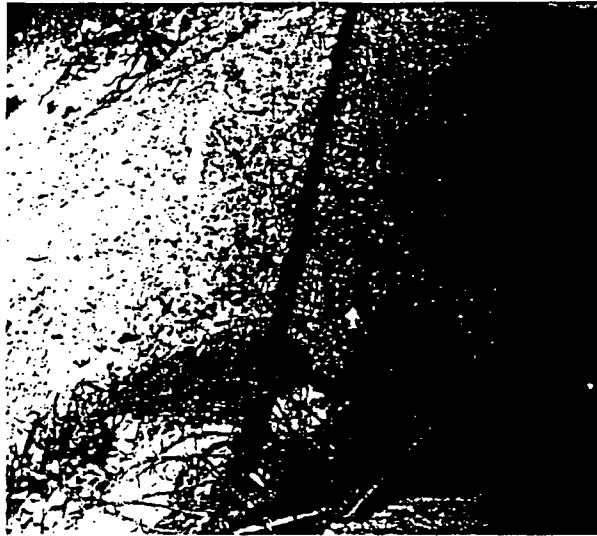


WATERFALL DRAINAGE



SWAMP CREEK

CARBONERO MINE

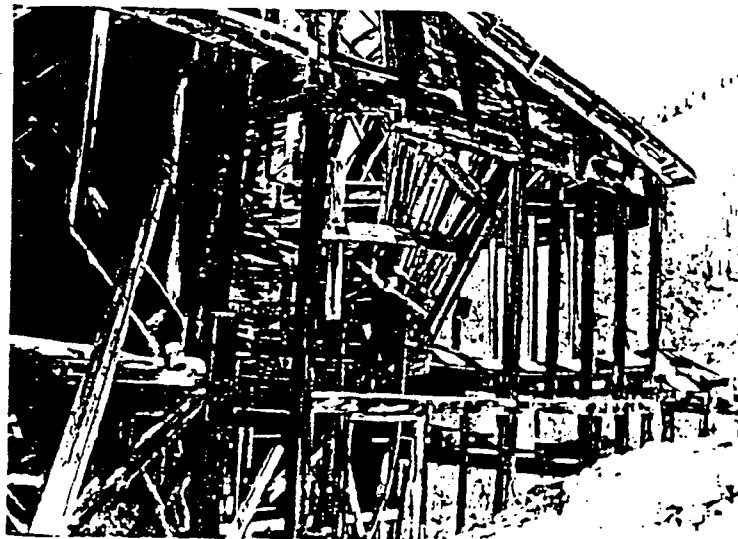


LEVEL 8 PORTAL (Lowest Portal)

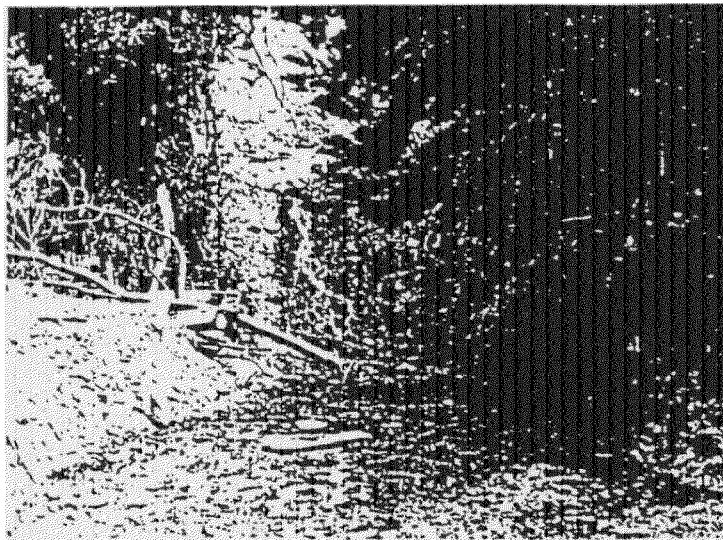


EROSION BELOW PORTAL

CARBONERO MILL



SILVERTIP MINE



UPPER PORTAL



LOWER PORTAL

SILVERTIP
IRON STAINING FROM LOWER PORTAL



CARRIBEAU MINE



IRON BOG



SILVER BELL MILL



TAILINGS POND



DOWNSTREAM FACE

SILVER BELL MINE

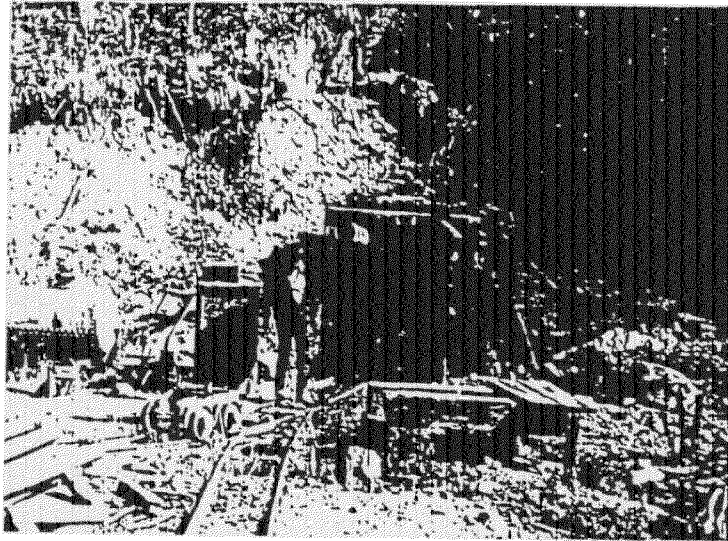


SILVER BELL SURFACE FACILITIES



SILVER BELL MINE PORTAL

NEW DOMINION MINE



MIDDLE PORTAL

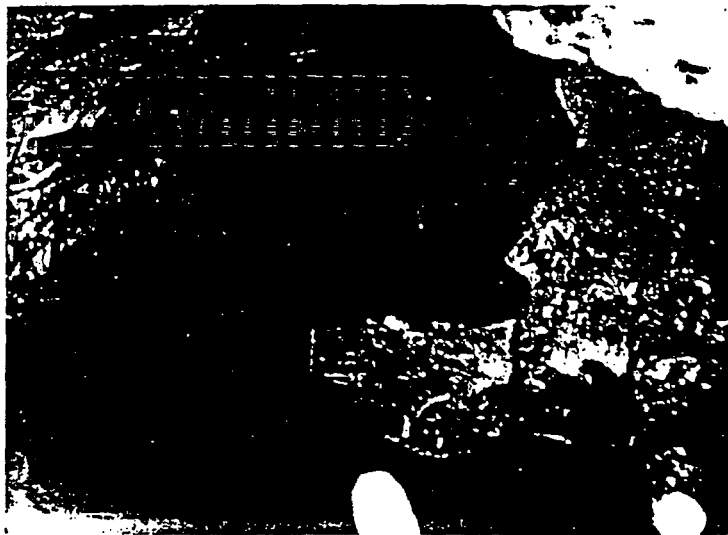


UPPER PORTAL

NEW DOMINION MINE



LOWER PORTAL



FLOODED INTERIOR OF LOWER PORTAL
TOP OF WOOD SETS VISIBLE

RECEIVED

NOV 13 1978

Memorandum
Union Oil Company of California
UNION 78

08 November 1978

EHE	
WRM	
REB	
FHB	
WHG	
WCG	
✓ EHL	
RRW	
GEM	
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JRM	
MMR	
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EHL

TO: G. C. Dohm, Jr.
FROM: W. G. Zinn *W.G.Z.*
SUBJECT: Ophir Property, San Miguel County, Colorado

The following is a proposal for work on the Ophir property for 1979 consisting of needs for which I am requesting advisory help from the Development Group. Several of the contemplated tasks mentioned, stem from suggestions made in John Roberts report of 9/18/78 on this property. All work described in this memo is made with the assumption that Union Oil acquires the properties from Silverbell Industries. There are six specific projects listed below which need our attention in 1979.

The first item to be considered by Minerals Exploration Company is our responsibility for stabilization of the tailings from the Silverbell Mine. It is my understanding, based on conversations with Mel Carlson and Les Smith (Silverbell employees) that Silverbell Industries had an agreement with Colorado-Utah Power Company to place tailings on the power company's land below the mine. Should Minerals Exploration Company acquire Silverbell, we then may be responsible for stabilization of the tails. Typical of old mining camps, the tailings are in a deteriorated condition and need attention. In addition, the tails are at the headwaters of the South Fork of the San Miguel River where the Howard Fork and the Lake Fork join. In my opinion, we should be prepared to take corrective action on the tailings if we are legally liable, and before we are required or ordered to do so.

The second need on the Ophir property has to do with various mining structures on the property such as dump ramps and various building sites (the Carbonero mill) on company-owned property. These structures are in poor condition and pose a hazard to the many tourists who visit the area during the summer months. It is suggested that the structures be destroyed to eliminate possible law suits against the company.

Similarly, numerous adits and possibly some shafts exist on the property of which some are open or partially accessible. These also pose a liability to the company due to the many tourists in the area. It is recommended that after geological evaluation these adits and/or shafts be securely sealed to eliminate this hazard and protect the company.

The fourth task we believe necessary to evaluate the geological potential of the area for a possible molybdenum deposit, is opening of the upper portal of the Silvertip adit. We would like this done next year so we can collect geochemical and geological information from the adit. John Roberts, on page 11 of his report, has given us a cost and time estimate to open this adit.

The fifth item we feel is necessary has to do with environmental considerations due to the sensitive area that the claims are in. We feel that to guarantee our further exploration efforts in the area in 1979 and later, that possibly four permits may need to be investigated and possibly secured. If required, these permits should be applied for and approved before any drilling, opening of adits or other physical work in related exploration efforts, are done next year. The permits in question are as follows:

11/8/78

1. A prospecting permit through the Colorado Mine Land Reclamation Board.
2. The EPA, National Pollution Discharge Elimination System (NPDES) permit.
3. The USFS Plan of Operations. *Posting of bond with USFS*
4. The Colorado Air Pollution Control Board has recently proposed revised air quality regulations, and should be investigated for compliance.

The last item necessary is for environmental considerations and has to do with a base line water analysis program. As you know, Terry Larson started a base line water analysis program during this past year in the project area. It is felt that this program should be continued and perhaps be expanded to give us a sound base for environmental consideration in future years. This program will be of particular use for the tailings problem and to monitor change in the water in our closing and opening of the existing adits.

Realizing the above documentation is very general and needs Los Angeles' approval before we mount efforts on any of the six programs, I would appreciate your and your staff's appraisal of the needs and costs to accomplish the six projects outlined. In addition, comments on your group's availability to direct or supervise these tasks is also solicited. Possibly a meeting can be scheduled to discuss these projects and related problems in the near future at your convenience.

WGZ:sg

cc: D.T.Arrieta
F.H.Buchella, Jr.
G.E.Gumble
E.H.Lindsey ✓
W.R.Moran

SILVER BELL INDUSTRIES'

PROPERTY REPORT

Ophir, Colorado

September 18, 1978

At the request of Mr. Glen Zinn, properties held by Silver Bell Industries near Ophir, Colorado, were inspected by Messrs. Arrieta and Roberts. Mines, mills, and tailings sites were examined as to their potential for mineral reserves, salvage value, environmental liability, and safety.

Ophir is situated in the San Juan Mountains of southwestern Colorado. Access is via Highway 77 from either Cortez or Montrose, Colorado. The area is ruggedly scenic, consisting of peaks reaching to nearly 14,000 feet and glaciated valleys. The alpine location coupled with a normally heavy winter snow pack supports several ski areas in the general area.

Mining activity in the area has been present since before the turn of the century. Early day ore was shipped via mule and railroad to Durango for smelting. Currently the nearest smelter would be in El Paso, Texas, or central Arizona. Previous mining interest has been centered on narrow vein deposits carrying lead and silver and zinc with minor amounts of gold.

Properties in the area held by Silver Bell Industries were operating during the 1920's and prior, and have seen intermittent activity through 1975. Generally income from the properties was scarcely sufficient to meet direct operating costs.

In the past Silver Bell Industries held a much better land position in the Ophir Valley but a dispute with the IRS resulted in the sale of claims containing some of the main vein structures. The principle example being the Silver Bell Mine of which Silver Bell Industries currently owns only the portal which is on an unpatented claim.

At present the surface facility of value is the Silver Bell mill and maintenance shops. Other mill and portal facilities in the area have value only as tourist attractions due to their age and state of disrepair.

Numerous adits and workings exist in the area but only those were examined which were of immediate interest to the exploration staff. Those examined include the Silver Bell, Carbonero, Silvertip, New Dominion, and Carribeau Mines.

SILVER BELL MINE

Surface facilities at the Silver Bell Mine include the only currently operable mill in the Ophir Valley. Wood structures inclose a small 100 tpd flotation circuit as well as a smaller gravity circuit used variously for gold and tungsten (hubnerite). 1975 saw the most recent use of the mill when it was used to treat ore from a small property near Rico, Colorado. An abbreviated list of equipment used in the mill includes:

- (1) 10x20 Pacific Jaw Crusher (primary)
- (1) 40" (approx) Spiral Classifier
- (1) 20" (approx) Spiral Classifier

- (1) 65 Marcy Ball Mill - Mine & Smelter Supply (100 hp)
- (8) Froth Flotation Cells - Lead Circuit
- (8) Froth Flotation Cells - Zinc Circuit
- (1) Disc Filter
- (1) Gardner Denver Vacuum Pump
- (1) 4x4 Ball Mill - Gravity Circuit

Mine Equipment Included:

- (1) Atlas Copco Air Compressor, recently acquired - no motor
- (1) Various Equipment - Sump Pumps - Ore Cars - Hoses - Wiring - Muckers - Locomotives, etc.
- (1) Melroe Bobcat Front End Loader
- (2) John Deere Track Type Front End Loaders (inoperable)

Mine facilities are in a greater state of disrepair than are the mill facilities. Due to the fact that no reserves for this mine are currently owned or controlled by Silver Bell Industries little attention was given to it and no attempt was made to enter it. During operations ore from the Silver Bell averaged 2-3 oz of silver and during exceptional months was sufficient to meet payroll. Overall, smelter receipts were sufficient to meet approximately one-half of the operating costs. At present the mine is partially flooded due to caving near the portal. Water outflow is clear and no iron staining is evident. Minimal problems should be encountered should it be decided to reopen this mine.

Tails from the Silver Bell mill are no longer on Silver Bell Industries' property due to the dispute with the IRS in

which the property was sold to Colorado-Utah Power Company. Silver Bell employees indicated that an agreement has been made with the power company under which Silver Bell Industries would stabilize the tailings area. It was felt that should Minerals Exploration Company acquire the property it would then become liable for stabilization of the tails. Samples of the tails were taken and returned to Tucson for testing, should it be necessary.

CARBONERO MINE

The Carbonero Mine is located midway up the valley and at an elevation of 11,480 feet. Access is via a "Jeep Trail" requiring fourwheel drive. Improving the road to any appreciable extent would be very expensive due to the steepness of terrain and the proximity of bedrock to the surface.

Mining at the Carbonero was conducted principally during the 1920's. Although undocumented, activity probably existed prior to the turn of the century. Most recently the mine was reopened for a couple of years during the early 1950's and mid 1960's. See attached production report.

1925 through 1931 seven levels above the portal at the 11,480' elevation were stoped out. The ore was a lead carbonate carrying silver values. Lower levels encountered increasing zinc values. Mining followed a narrow (12" avg) horsetailing vein structure. Ore was stoped out, hand sorted in the stope, lowered by hoist through a winze to the portal

level and trammed by cable to the Carbonero Mill which was located near the valley floor. During the 1960's stoping was completed on the portal level. No appreciable measured reserves remain on or above the portal level. Should future mining follow the vein to depth, increasingly higher zinc values might be encountered.

Surface facilities no longer exist and the portal is caved. Subsequent to the last mining activity a cave at the portal blocked drainage from the mine and backed water up into the old workings.

An attempt to reopen the portal resulted in the explosive release of the stored water. The massive outflow was sufficient to erode away nearly half of the mines waste dump and to permanently destroy the existing access road. A cyclic winter cave and plug followed by a spring blow out was ended when the county donated a culvert which was placed through the caved area allowing a constant flow through the portal area. Flow was estimated to be in excess of 300 gpm. Due to the large water flow and the iron staining occurring in this mine it is recommended the existing portal not be reopened due to environmental considerations. Should it be desired in the future to reopen the mine, a new portal should be developed and tied in to the old workings. This would require approximately 300 feet of crosscut.

The Carbonero mill site represents no more than a local

tourist attraction due to its poor physical condition. The original equipment has been salvaged leaving only deteriorating wood shell. Due to the heavy tourist traffic through the area (est. 50-100 cars/day) it is recommended that what remains of the Carbonero Mill be demolished before it collapses on a tourist and results in a lawsuit.

Additional information on this mine may be obtained from the Chase Report, Carbonero Mine, March 19, 1924, of which Silver Bell Industries has a copy. Original level maps are available from Silver Bell Industries or may be obtained in microfilm form from the Colorado Bureau of Mines.

SIVERTIP MINE

The Silvertip consists of two cross cuts driven in from the surface to intersect a vein. The upper crosscut was driven initially and some stoping along the vein structure was accomplished. The lower crosscut was an unsuccessful attempt to intersect the same vein. That they encountered a parallel structure is suggested by examining level maps. Very little stoping was done from the lower crosscut.

The upper portal was last opened in 1975, since then it has been closed by caving at the entrance. A small flow of water (<50 gpm) issued from the caved entrance.

Evidence of molybdenum mineralization in the ribs and back of the lower workings has created interest in reopening it for purposes of sampling the crosscut. The working seems to be in

reasonably good condition and should need no scaling or major timber repairs. Due to the high iron content of the surrounding rock 4"-8" of iron mud is present throughout. Where the workings drift along the vein, a 4"-12" accumulation of iron sediment is evident on all surfaces. This accumulation of iron presents the only obvious problem in reopening the workings for sampling. A water flow estimated at approximately 150 gpm originates along the vein and exits through the crosscut. Any activity within the workings puts iron-mud into suspension creating a bright red stream down the hillside. Should this suspended load of iron silt reach other flowing drainages a pollution problem would be created which requires a lengthy permitting process and raises the vocal ire of the residents in Ophir. Currently no problem exists in that during the dry season (late summer and fall) flow from the Silvertip is absorbed into coarse gravel sediments which filter the water before it co-mingles with local streams. Should it be desired to have activity in the workings during a wetter part of the year when co-mingling before filtration is a possibility, a small dam could be created where the crosscut intersects the vein and the flow channeled through a pipe past the area being disturbed by sampling.

NEW DOMINION MINE

The New Dominion Mine consists of three portals situated above one another. The upper portal drifts in along the vein structure while the two lower portals are crosscuts. The upper and mid

portals are open while the lower portal is partially closed with water standing at the back level (approx 6'). It appears that there is about a 3 foot depth of silt behind the caved area and which would have to be cleaned out to reopen the mine. Water flow from the lower portal is estimated to be approximately 150 gpm. Due to the water volume and silt load within this mine great care would have to be taken to prevent significant short term pollution of the Howard Fork of the San Miguel River.

The New Dominion Mill is located directly below the lower portal. Little of the mill remains but it appears to have been a gravity separation process. Currently the mill is being salvaged by an Ophir resident, Randy Belisle.

CARRIBEAU MINE

Land transactions have left Silver Bell Industries holding the vein structure for the Carribeau Mine but not access from the surface. Two portals have existed in the past but are now collapsed. An open portal which has access to the old workings exists on Dolores claim which is no longer held by Silver Bell Industries. Access to this mine is via "Jeep Trails". During its production period ore was trammed by cable to the valley floor.

Environmental Considerations:

In order to continue further exploration and claim validation work at the Ophir property next summer (May-Sept 1979)

several permits should be applied for and approved prior to any work such as drilling or placing a new adit in the area.

These permits are as follows:

1. Colorado Mined Land Reclamation Board, Propsecting Permit. Time to obtain permit is short and information required to complete the application is minimal.
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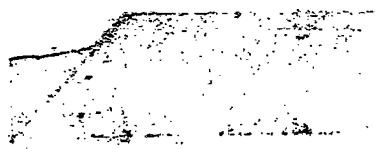
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1949	593.998	1,026.864	66,852.46	114.2246	27.8743	
1950	638.037	1,068.393	89,244.425	115.3480	29.6740	
1951	582.152	1,233.268	83,236.70	134.1954	34.6787	
1952	968.625	980.096	101,855.38	290.9619	57.6206	37.8450
1953	1,114.981	523.35	54,202.00	497.9800	27.3940	21.0510
1954	<u>1,440.504</u> <u>7,957.987</u>	<u>179.046</u> <u>7,836.874</u>	<u>35,475.42</u> <u>535,550.31</u>	<u>535.8196</u> <u>1,881.2029</u>	<u>16.3199</u> <u>254.3958</u>	<u>76.0259</u> <u>134.9219</u>

TUNGSTEN PRODUCTION

<u>1953</u>	<u>CONCENTRATE</u> <u>WEIGHT</u> <u>POUNDS</u>	<u>TUNGSTEN</u> <u>OXIDE</u> <u>POUNDS</u>
	3,893	2,264.69

Melvin Carlson, Engineer
Silver Bell Mines Company

SILVER HILL MINES COMPANY
CARBONADO MINE
SAN MICHAEL COUNTY, COLORADO



Engineering Report

By Russell R. McLaughlin
Mining Engineer
Bureau of Mines

SILVER BELL MINES COMPANY
CARBONERO MINE
SAN MIGUEL COUNTY, COLORADO

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SILVER BELL MINES COMPANY
CARBONERO MINE
SAN MIGUEL COUNTY, COLORADO

ENGINEERING REPORT

By

Russell R. McLellan

INTRODUCTION

Eugene H. Sanders, president of the Silver Bell Mines Company, has proposed an extensive lead, zinc, copper exploration project at the Carbonero mine near Ophir, Colo. The total estimated expenditure for the applicant's proposed drifting, raising, and diamond drilling is \$284,373.00, half of which is to be contributed by the Silver Bell Mines Company conforming to section 9 of Defense Minerals Administration form MO-5. The property was examined on December 12, 1951, by W. B. Meek, of the U. S. Geological Survey, and R. R. McLellan, of the U. S. Bureau of Mines. The applicant's proposals and costs were considered to be excessive and a revised program has been prepared by the examining team.

ACKNOWLEDGMENTS

D. R. Wilfley, consulting engineer for the Silver Bell Mines Company, provided the field team with maps and detailed information. General information, sample returns, and recent surveys were obtained from Albert Smith, mine superintendent, and Melvin Carlson, resident engineer of the Silver Bell Mines Company.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The Carbonero mine is 3.5 miles east of the present town of Ophir, Colo., and is approximately 1 mile north-east of Old Ophir in the Iron Springs Mining District, secs. 25 and 36, T. 42 N., R. 9 W., N. M. P. M., San Miguel County, Colo. (fig. 1).

The producing veins in the Carbonero mine are accessible through the Shoeffly crosscut or No. 8 level at an altitude of approximately 11,480 feet. The crosscut was driven in the precipitous south slope of Silver Mountain and the portal is accessible by truck road from the Ophir Pass road, Colorado State Highway 145.

The surrounding terrain is extremely rugged with peaks and serrated ridges ranging from 13,000 to 14,000 feet elevation. Although heavy snowfall and snowslides are common during the winter months, an attempt will be made to maintain continuous operations.

Ore will be treated at the Silver Bell mill, at Ophir, and concentrates hauled by truck to Leadville, Colo.

The mine is within commuting distance (15 miles) of Telluride, Colo.; however, a few residences for miners are available at Old Ophir and at Ophir.

Sufficient water is available at the mine and a power line has been installed. Supplies and equipment are trucked to the mine from Ophir.

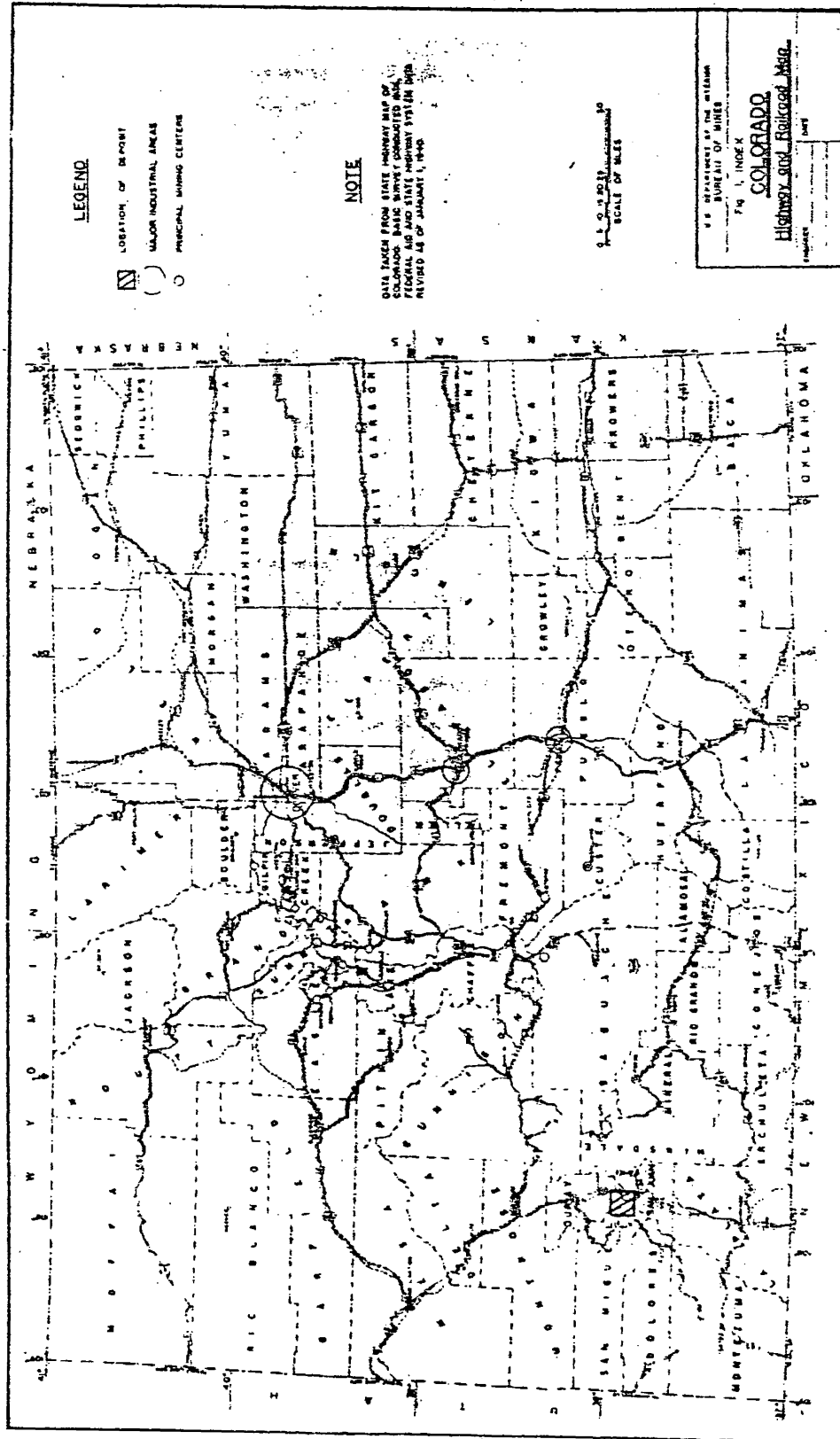


FIG. 1 LOCATION MAP CARBONERO MINE SAN MIGUEL CO., COLO. DMA 2165

HISTORY AND PRODUCTION

The Carbonero claim was located in 1897 and produced on a small scale until 1907 when the Carbonero Mines and Reduction Company was formed to buy and operate the mine. In 1950-51 the Silver Bell Mines Company bought the entire stock of the Carbonero Mines and Reduction Company and proceeded to rehabilitate the lower workings.

Until 1924 all ore produced was crude or direct smelting ore. At that date O. H. Shoup built a 50-ton concentrating mill in the gulch below the mine and treated Carbonero ore until he relinquished his option in 1926 or 1927. The property was then obtained by Carlo Girardi who operated the mine and mill for several years. No production is recorded since 1941.

Following is the incomplete production record obtained from the Statistics Branch, Region IV, Bureau of Mines:

Period	Tons Ore	Ounces		Lead	Pounds	
		Gold	Silver		Zinc	Copper
1907-41	101,662	2488.0	885,501	14,210,990*	391,280*	
1918-41						288,903*

Average per ton: 0.024 ounce gold, 8.71 ounces silver, 6.99 percent lead, 0.16 percent copper.

*Records incomplete.

With the exception of three or four years, no attempt was made to save zinc. During 1938 a recorded 14,618 pounds of zinc was recovered from 155 tons of crude ore for an average of 4.7 percent.

No production record is available for the years preceding 1907.

The average gross value of all recorded ore, less zinc, produced from 1907 to 1941 amounts to \$36.02 per ton. Calculations are based on metal price quotations of January 1952.

OWNERSHIP AND EXTENT

The entire stock of the original Carbonero Mines and Reduction Company was purchased by the Silver Bell Mines Company in 1950-51. Exploration will be conducted on the following claims owned by the company:

Carbon	Survey No. 16906
Carbonero	Survey No. 16906
Carbonado	Survey No. 16906
West Panama	Survey No. 19815
East Panama	Survey No. 19815

Access to the above claims will be by the Shoofly tunnel which passes through the following claims owned by the company:

North Star	Survey No. 16905
Vindicator	Unpatented
Vindicator No. 1	Unpatented
Vista	Unpatented

DESCRIPTION OF THE DEPOSITS

Veins to be considered in the Carbonero group (fig. 2) are the Carbonero, the Panama, and the Mohawk. The Carbonero and Panama are steeply dipping fissure veins that strike northeast. Little positive information is available concerning the Mohawk other than the fact that it crops out between the Panama and the Carbonero veins. Rich lead-silver ore is reported to have been mined from the Mohawk but all workings were completely covered by talus and deep snow drifts which prevented surface mapping and sampling by the examining team.

The veins are predominantly in the San Juan tuff. Underlying sediments are estimated to be 800 to 1,000 feet below the No. 8 or Shoofly tunnel level.

Caving, bad air, and rotten ladders prevented a thorough inspection of the Carbonero workings above the Shoofly level. Old maps from which figure 3 was drawn show almost continuous stoping from the No. 7 level to the surface. Exposed portions of the vein in pillars along the Shoofly level show galena, sphalerite, chalcopyrite, and pyrite as being largely confined to a definite band of concentrated mineral. The streak ranged from a fraction of an inch to a reported 3 feet in thickness. Only the pinched areas remained in place after stoping. A 5-inch hanging wall streak and a 5-inch footwall streak were observed at the east heading where the present owners had just commenced mining operations. The company sample map shows a sharp increase of value as drifting progressed eastward. Galena and sphalerite were not visible at the west heading as the vein had pinched to a knife-edge thickness.

High-grade sphalerite is reported to have been mined from the Panama vein (fig. 4); however, the stope could not be checked or sampled due to caving and bad air. An old pile of several tons of hand-sorted ore found on the No. 8 level at the west end of the Panama stope contained fragments 8 inches in diameter averaging possibly 45 percent sphalerite. A grab sample of the fines taken by the examining engineer averaged 0.015 ounce gold and 7.1 ounces silver per ton,

6.1 percent lead, 3.5 percent zinc, and 0.15 percent copper. A caved area approximately 300 feet from the Shoofly tunnel prevented an examination of the west Panama heading which is believed to be approximately 100 feet beyond the cave. In the exposed portions of the vein, galena and sphalerite generally are concentrated in narrow footwall lenses not exceeding 6 inches in thickness.

Approximately half of the east Panama drift was badly flooded due to damming; therefore, detailed mapping and sampling was not attempted in this area. The vein appeared to pinch to the east; consequently, little stoping was done east of the Shoofly tunnel. No record is available of the average thickness of the base metal zone mined from the Panama stopes. Samples cut from pillars along the drift averaged 3.0 feet in width and contained an average of 0.012 ounce gold and 3.0 ounces silver per ton, 4.3 percent lead, 2.0 percent zinc, and 0.08 percent copper.

MINABLE ORE RESERVES

An accurate determination of the minable ore reserves was not possible during the field check as the only level completely accessible was the No. 8 or Shoofly level along the Carbonero vein. No attempt had been made by the company to open the upper levels for mapping or sampling. The old stope maps are considered to be inaccurate; therefore, at the date of this report, the minable reserve must be limited to the No. 8 level of the Carbonero vein. The 60 feet of

exposed vein in the west Carbonero drift is too low grade to be classified as ore. Approximately 11,000 tons of indicated ore and 4,500 tons of inferred ore with an average gross value of \$32.50 per ton are estimated to be accessible for mining from the east Carbonero drift. Samples cut at 10-foot intervals show an increase of value as drifting progressed eastward. Drifting by the present owners commenced December 11, 1951, and heading assays as of December 26-28, 1951, averaged 0.30 ounce gold and 42.0 ounces silver per ton, 16.09 percent lead, 2.45 percent zinc, and 4.2 percent copper for an average width of 1.3 feet.

Total mining, milling, and smelting costs are expected to average \$16.00 per ton of crude ore produced.

PRESENT STATUS

Exploration and Development

Rehabilitation of the Carbonero mine commenced in May 1951. During the summer a truck road was built and a power line installed from the Ophir road to the Shoofly tunnel. Several buildings and snowsheds were repaired at the portal. Underground rehabilitation was still in progress at the date of the examination, and one round had been blasted in the east Carbonero drift. All headings and stopes in the Carbonero and Panama veins were inaccessible above the Shoofly level. The east and west headings of the Panama drift were not accessible on the Shoofly level. The Mohawk workings had not been opened and at the examination date the portal was under several feet of snow.

Past development in the Carbonero mine consists of approximately 8,800 feet of drifts and crosscuts, 4,550 feet of adits, and 1,600 feet of raises.

Mining and Milling Equipment

The following equipment is available for use at the Carbonero mine:

- 1 - Ingersoll-Rand Imperial type 10 air compressor, 12 by 10 and 6-1/2 by 10, with 50 hp. motor and belt.
 - 1 - Gardner-Denver type WSH air compressor, 320-cu. ft., with 75 hp. motor and V-belts.
 - 20 - Type Z card, 26-cu. ft., end-dump mine cars.
 - 2 - 8-inch Copps air-powered blowers.
 - 3 - DA-30 Ingersoll-Rand automatic-rotated drifters.
 - 2 - R48 stopers.
- Half time use of Willys jeep pickup truck.

Other facilities at the mine include a compressor house, tunnel house and shop, ore bin, four 2-room dwellings, sufficient power and water.

Ore will be treated at the Silver Bell Mines Company mill approximately 3 miles from the Shoofly tunnel portal. The mill has operated continuously since 1946 and has a maximum capacity of 200 tons per day. It is equipped with a No. 65 Marcy ball mill, Akins classifier, Denver conditioner, unit cell, and 8-cell flotation machine, thickener, and an American-type 3-leaf filter.

PROJECT PROPOSALS, WITH COSTS

Exploration and Development

The following work as proposed by the applicant includes exploration of the Mohawk, Carbonero, and Panama veins by drifting, raising, and diamond drilling from the Shoofly tunnel level:

(1)	Drift east on Carbonero vein, Shoofly level	1,300 feet
(2)	Raise on Carbonero vein, east drift	330 feet
(3)	Drive west on Carbonero vein	500 feet
(4)	Drive east on Panama vein	1,300 feet
(5)	Drive west on Panama vein	800 feet
(6)	Raise on Panama vein, west drift	450 feet
(7)	Diamond drill from west Panama to Mohawk vein	1,500 feet
(8)	Diamond drill from east Carbonero to north splits	1,200 feet

The complete project as proposed by the applicant was estimated to cost approximately \$284,373.00. The total expenditures are distributed as follows:

Labor, 2 headings operated simultaneously, 18 months at \$5,069.00/month	\$ 91,242.00
Labor, 1 heading, 3 months at \$3,869.00/month	11,607.00
Labor, raising, 11 months at \$1,125.00/month	12,375.00
Supervision, 21 months at \$1,775.00/month	37,275.00
Materials and supplies	53,304.00
Diamond drilling, 2,750 feet at \$5.00/foot	13,750.00
Purchase of equipment	31,198.00
Rental of company-owned equipment	<u>7,770.00</u>
Total	\$258,521.00
Add 10 percent for contingencies	<u>25,852.00</u>
	<u>\$284,373.00</u>

In view of the inaccessibility of much of the mine for mapping and sampling, it is believed that the applicant's extensive proposals as related above are not completely justified. A revised program is recommended confining all exploration to the Panama vein and to the east Carbonero vein (fig. 2) as follows:

- (1) Drift 500 feet on the east Panama vein.
- (2) Drift 500 feet on the west Panama vein.
- (3) Drift 900 feet on the east Carbonero vein.

Approximately eleven months' time will be required to complete the project at an estimated cost of \$80,500.00.

New Equipment and Facilities

The company will need to purchase the following equipment which will be rented to the project on a depreciation basis:

<u>Item</u>	<u>Cost</u>	<u>Depreciation Per Month</u>
1 Gardner-Denver mine car loader	\$3,177.00	\$52.70
1 Ventilating fan and blower	5,000.00	83.30
Total	\$8,177.00	\$136.00

The following equipment will be furnished by the company on a rental basis:

<u>Item</u>	<u>Replacement Value</u>	<u>Depreciation Per Month</u>
1 Ingersoll-Rand Imperial type 10 air compressor, 12 by 10 and 6-1/2 by 10, with 50 hp. motor and belt	\$6,000.00	\$100.00
1 Gardner-Denver type WBH air compressor, 320-cu. ft., with 75 hp. motor and V-belts	10,000.00	166.00
2 8-inch Coppus air powered blowers (\$700.00 each)	1,400.00	23.00
30 Type Z card, 20 cu. ft., end-dump mine cars (\$240.00 each)	7,200.00	120.00
3 DA-30 Ingersoll-Rand automatic-rotated drifters	3,000.00	50.00
1 Willys jeep pickup truck	2,000.00	30.00
1 Battery locomotive	6,000.00	100.00
Total per month		\$589.00

The following materials and supplies are expected to be required for eleven months' operation:

Explosives at 10 pounds per foot, \$0.18 per pound, 19,000 pounds	\$3,420.00
16-pound rail, 3,800 feet, plus splice bars, bolts, spikes, and ties	1,900.00
4-inch pipe, 4,500 feet, with couplings, at \$1.19 per foot	5,355.00
3/4-inch pipe, 3,500 feet at \$0.13 per foot	455.00
10-inch ventilating pipe, 4,500 feet at \$1.25 per foot	5,625.00
Throwaway bits, 16,150 at \$0.25 each	4,037.00
1-1/8-inch hollow round steel at \$390.00 per ton, 1-1/2 tons	585.00
Timber	1,000.00
Small tools	250.00
Total	<u>\$22,627.00</u>

Transportation

With the recent abandonment of the railroad through Ophir, all equipment, supplies, and concentrates must be hauled by truck. Lead concentrates are hauled 270 miles to Leadville, Colo., at an approximate cost of \$16.00 per ton. No additional road construction will be necessary to conduct the project. Transportation of men to the mine from the Silver Bell Mines Company office will cost approximately \$15.00 per month, or \$165.00 for the project.

Manpower

There is sufficient manpower available for the work. The company recruits approximately one fourth of its help from the Indian reservations a few miles to the south. The turnover is reportedly low at the Silver Bell mine and probably will be equally so at the Carbonero mine.

It is proposed to drive two drift headings simultaneously, working a 6-day week, 26-day month, 1-shift operation. The drifting will be done by two miners in each heading on a contract basis of about \$12.00 per foot for drilling, blasting, and mucking. The following labor and supervision charges include overtime, old age benefits, workman's compensation, and unemployment compensation:

<u>Drifting</u>	<u>Per Hour</u>	<u>Per Month</u>
4 Miners, 2 headings at \$12.00 per foot contract	\$2.68	\$2,400.00
1 Motorman	1.49	334.00
1 Motorman helper	1.49	334.00
1 Compressor operator	1.49	334.00
Total per month for 2 drift headings		<u>\$3,402.00</u>
Total per month for 1 drift heading		<u>\$2,202.00</u>

Rehabilitation and preparation

2 Miners	\$1.54	\$690.00
1 Motorman	1.49	334.00
1 Motorman helper	1.49	334.00
1 Compressor operator	1.49	334.00
Total per month		<u>\$1,692.00</u>

Supervision

1 Mine superintendent		\$468.00
1 Mine engineer, part time, not to exceed \$150.00 per month		150.00
1 Bookkeeper, part time, not to exceed \$50.00 per month		<u>50.00</u>
Total supervision per month		<u>\$668.00</u>

Power

Electric power from the Western Colorado Power Company is obtained at the rate of \$0.006 per kilowatt hour. Power consumption at 125 horsepower demand is computed to be 16,972 kilowatt hours, or \$307.65 per month.

Water

Sufficient water is available at the mine.

Freight

Freight is estimated at \$700.00 for eleven months of operation.

Recapitulation of Costs

The total expenditures for the revised exploration program are estimated to be as follows:

Labor, 1 month preparation and rehabilitation	\$ 1,692.00
Labor, 9 months drifting, 1,800 feet, 2 headings at \$3,402.00/month	30,618.00
Labor, 1 month drifting, 100 feet, 1 heading	2,202.00
Supervision, 11 months at \$668.00 per month	7,348.00
Materials and supplies	22,627.00
Owned equipment rented to project on a depreciation basis, 11 months at \$589.00 per month	6,479.00
Purchased equipment rented to project on a depreciation basis, 11 months at \$136.00 per month	1,496.00
Transportation, 11 months at \$15.00 per month	165.00
Power, 11 months at \$307.65 per month	3,384.00
Freight, 11 months	700.00
Total	\$76,711.00
Contingencies (approximately 5 percent)	3,789.00
Total cost of project	<u>\$80,500.00</u>

Based on the average metallic content of ore produced from 1907 to 1941 and present metal prices, approximately 35,800 tons of ore must be mined to repay the Defense Minerals Exploration Administration loan on a 5 percent royalty schedule.

PROPOSED FINANCING

The company is prepared to invest \$40,250.00, amounting to 50 percent of the total estimated expenditure. Repayment of the loan will be made under the terms stated in section 14 of form MD-5.

CONCLUSIONS

The applicant's proposal to advance all headings on the Shoofly level and to drive two raises is considered excessive and, in part, questionable as to being strictly exploration. The proposal to diamond drill the Mohawk vein from the west Panama drift is unsound geologically as the strike and dip of the vein were not determined before the outcrop was buried under several feet of snow. There is no underground evidence that the Mohawk vein extends downward to the elevation of the Shoofly level.

Diamond drilling of the split in the east Carbonero drift is considered unnecessary as the applicant proposes eventually to drift on the split. A continuation of the drift would be of more value than one or two holes.

Raising as proposed by the applicant might be classified as development work and should be financed by the company on showings of marginal ore.

Drifting west on the Carbonero vein to afford access to the Mohawk vein is unsound for reasons described above pertaining to the Mohawk. The lack of favorable structure in the west Carbonero vein further detracts from the advisability of extending the drift at this time.

The applicant's operating costs, particularly supervision, are considered to be excessive and have been reduced in the revised program.

Sample values and geologic evidence indicate that the Panama and east Carbonero veins merit exploration by drifting. The company is well financed and is sufficiently equipped to conduct an exploration program successfully.

RECOMMENDATIONS

It is recommended that only the following proposals be approved:

- (1) Drift 900 feet on the east Carbonero vein.
- (2) Drift 500 feet west on the Panama vein.
- (3) Drift 500 feet east on the Panama vein.

Total expenditure: \$80,500.00

Defense Minerals Exploration
Administration participation: 40,250.00

Silver Bell Mines Company
participation: 40,250.00

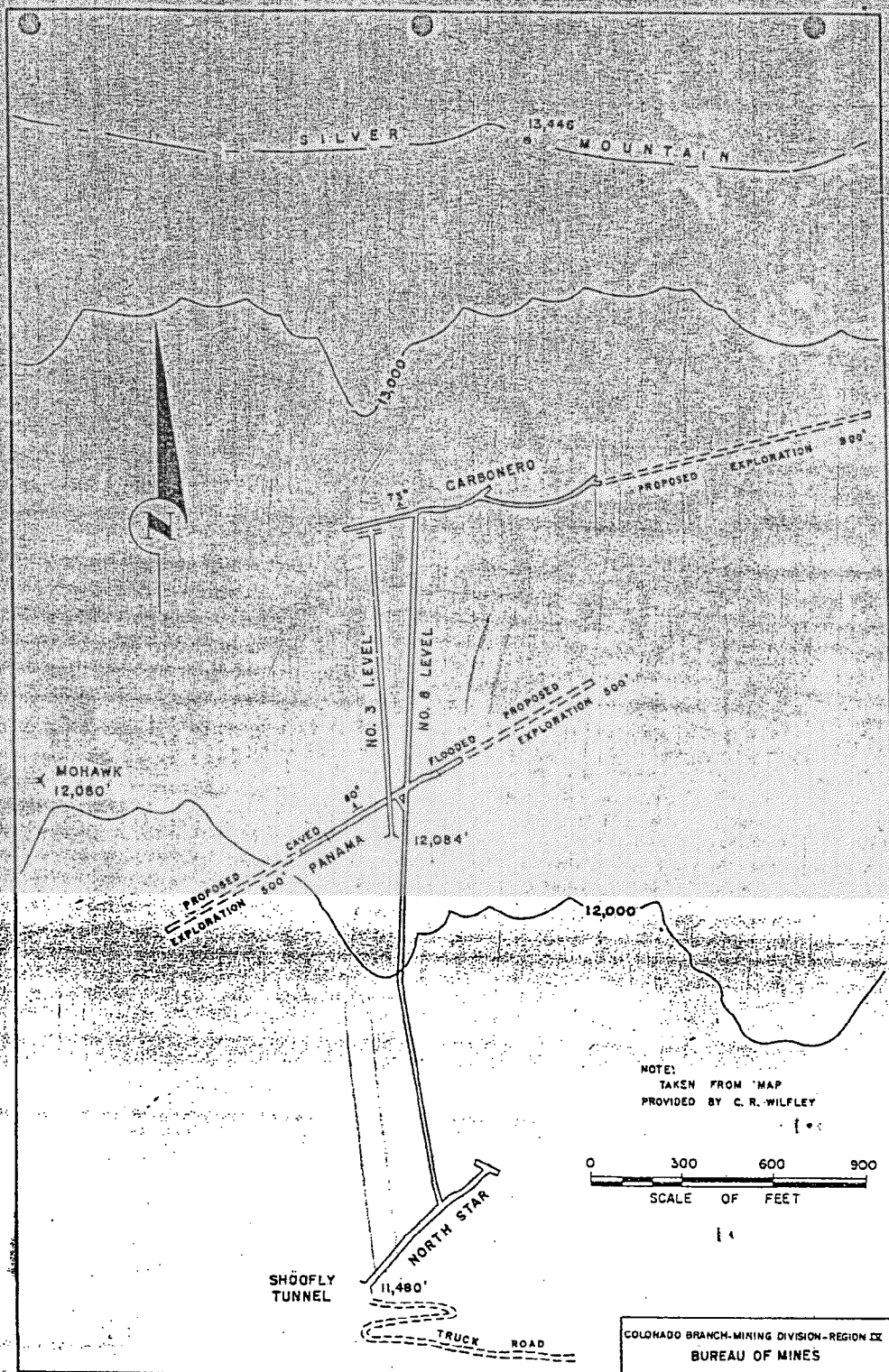


FIG. 2 CARBONERO MINE AREA PLAN VIEW SAN MIGUEL CO., COLO. DMA 2165

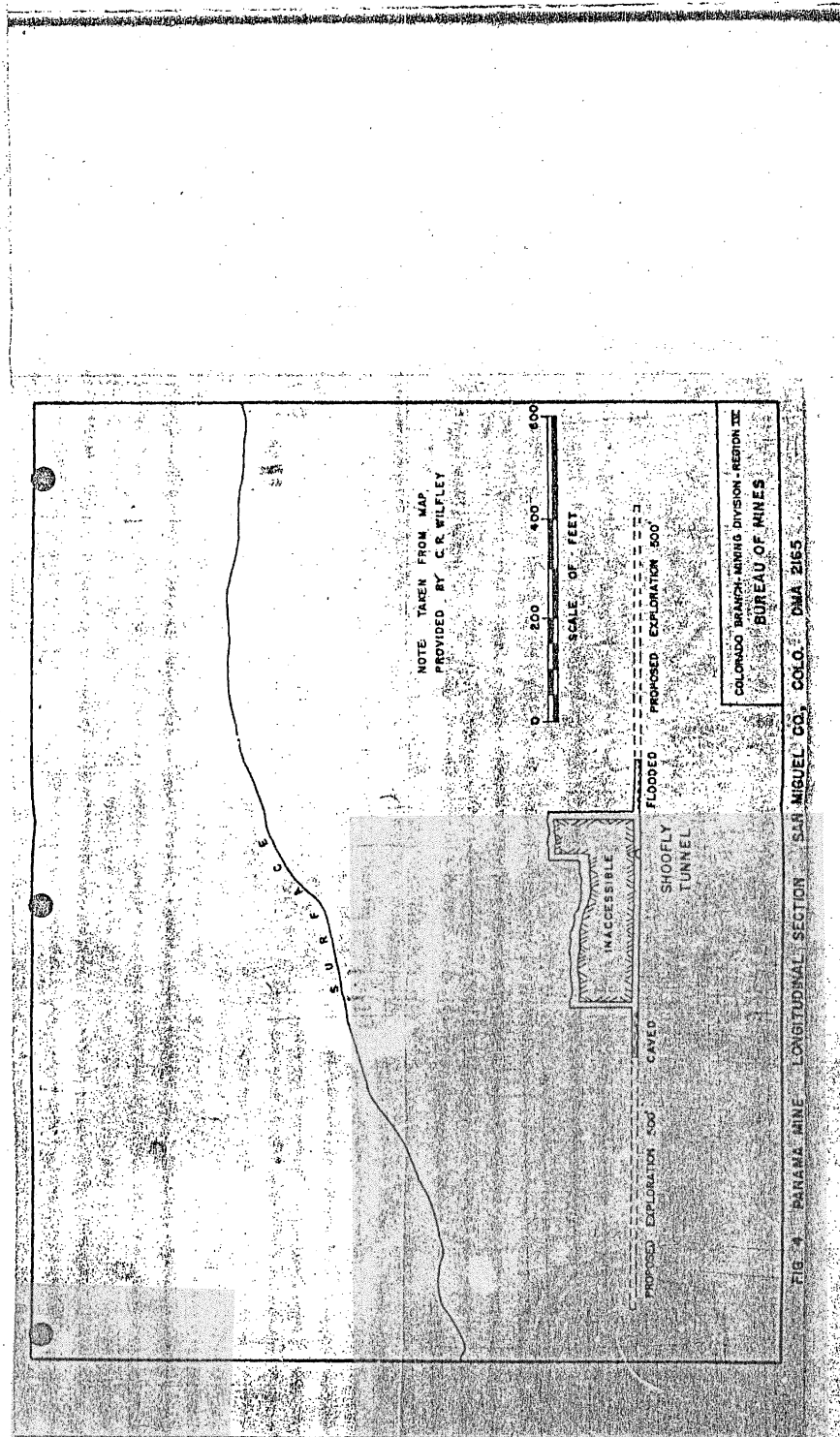


FIG. 4 PANAMA MINE LONGITUDINAL SECTION SAN MIGUEL CO., COLO. DMA 2165

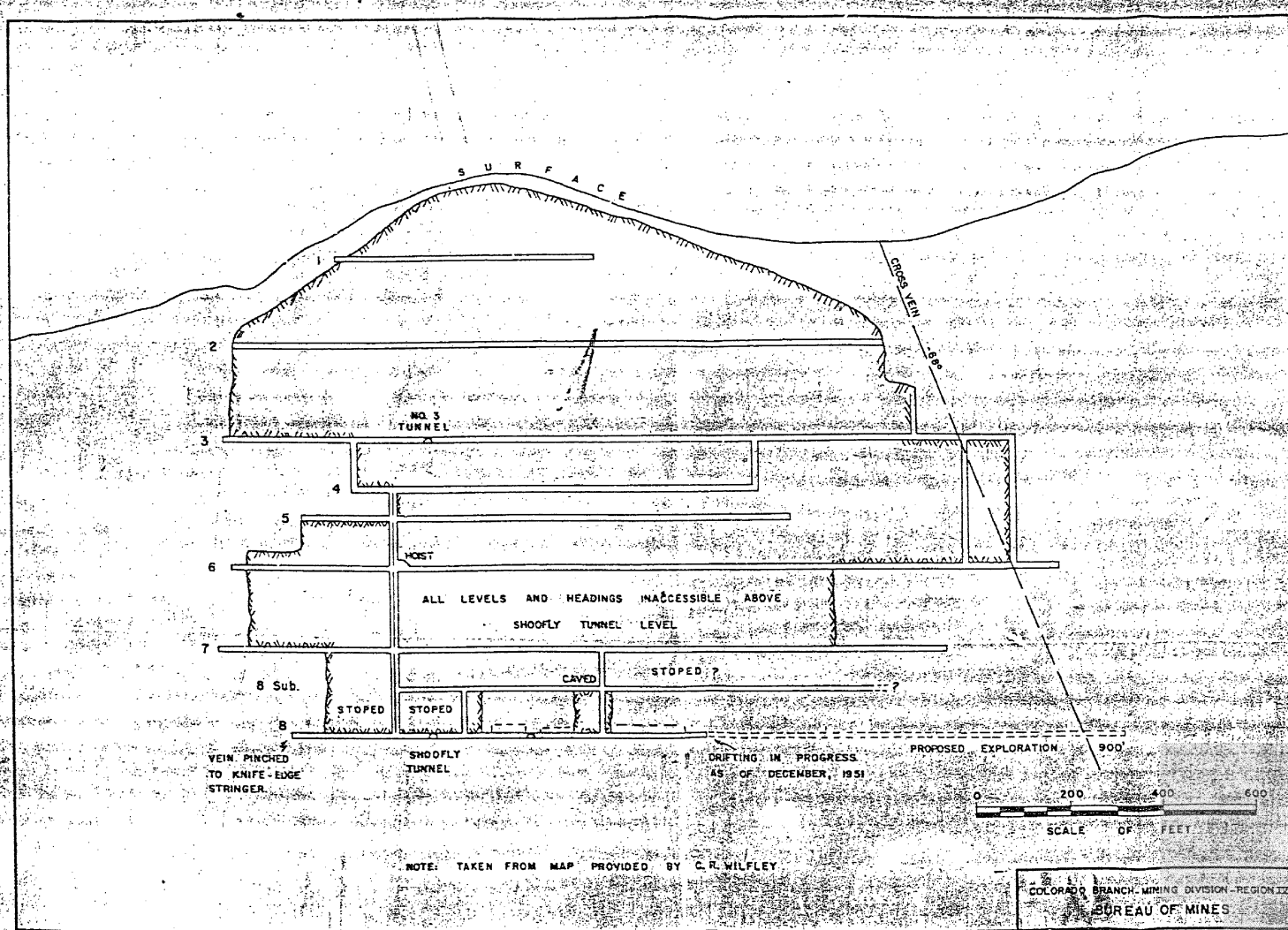


FIG. 3 CARBONERO MINE LONGITUDINAL SECTION SAN MIGUEL CO., COLO. DMA 2165

Agreement and Plan of Reorganization

dated as of

May 18, 1977

by and among

Union Oil Company of California,

Union Oil Subsidiary, Inc.

and

Molycorp, Inc.

U 001237

AGREEMENT AND PLAN OF REORGANIZATION
UNION OIL COMPANY OF CALIFORNIA,
UNION OIL SUBSIDIARY, INC. and MOLYCORP, INC.

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U 001240

AGREEMENT AND PLAN OF REORGANIZATION (the "Agreement"), dated as of May 18, 1977, by and among UNION OIL COMPANY OF CALIFORNIA, a California corporation ("Union"), UNION OIL SUBSIDIARY, INC., a Delaware corporation ("Subsidiary"), and MOLYCORP, INC., a Delaware corporation ("Molycorp").

WITNESSETH:

WHEREAS, all of the outstanding capital stock of Subsidiary is owned by Union; and

WHEREAS, the Boards of Directors of Subsidiary and Molycorp, respectively, deem it advisable and in the best interests of Union, Subsidiary and Molycorp and their respective stockholders that Subsidiary merge with and into Molycorp pursuant to this Agreement and an agreement of merger (the "Agreement of Merger") between Subsidiary and Molycorp substantially in the form of Exhibit A attached hereto; and

WHEREAS, Subsidiary and Molycorp propose to enter into an Agreement of Merger which provides, among other things, for the merger of Subsidiary with and into Molycorp (the "Merger"), the conversion of shares of Subsidiary Common Stock ("Subsidiary Common Stock") into shares of the surviving corporation and the exchange of shares of Molycorp Common Stock, issued and outstanding immediately prior to the effective date of the Merger, into Union Common Stock, par value \$8½ per share ("Union Common Stock"), all as more fully described in the Agreement of Merger; and

WHEREAS, the Boards of Directors of Union, Subsidiary and Molycorp, respectively, have approved and adopted this Agreement and the Agreement of Merger as a plan of reorganization within the provisions of Section 368(a)(1) of the Internal Revenue Code of 1954, as amended (the "Code");

NOW, THEREFORE, in consideration of the premises and of the mutual agreements, provisions and covenants herein contained, the parties hereto hereby agree as follows:

ARTICLE I

THE MERGER

Subject to Article V of this Agreement, the Agreement of Merger shall be executed and acknowledged by each of Subsidiary and Molycorp in accordance with the laws of Delaware and delivered to the Secretary of State of the State of Delaware on the fifth business day (no Saturday, Sunday or legal holiday in New York, California or Delaware being deemed to be a business day) following the day on which the last of the stockholder approvals referred to in Section 4.02 hereof shall have been obtained and the conditions of Article V satisfied or waived or such earlier or later date as may be mutually agreed to by Union and Molycorp. The time of the delivery to the Secretary of State of the State of Delaware is herein referred to as the "Time of Filing." The "effective time of the Merger" shall be the time specified in the Agreement of Merger. At the effective time of the Merger, the separate existence of Subsidiary shall cease and Subsidiary shall be merged with and into Molycorp. Subsidiary and Molycorp are hereinafter sometimes referred to as the "Constituent Corporations" and Molycorp, the party to the Merger surviving the Merger, is hereinafter sometimes referred to as the "Surviving Corporation." Union agrees at and following the effective time of the Merger to issue shares of Union Common Stock to the extent set forth in, and in accordance with the terms of, the Agreement of Merger. The exchange ratio of shares of Union Common Stock for each share of Molycorp Common Stock outstanding immediately prior to the effective time of the Merger or into or for which other outstanding securities of Molycorp are convertible or exercisable as set forth in Article 4 of the Agreement of Merger, shall be subject to adjustment as follows: in the event that, subsequent to the date of this Agreement but prior to the effective time of the Merger, the outstanding shares of Union Common Stock shall have been changed into or exchanged for a different number or kind of shares or securities through reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split, or other like changes in Union capitalization, then an appropriate and proportionate adjustment shall be made in the number and kind of shares or securities to be thereafter delivered pursuant to the Merger, it being understood that in no event shall other than Union Common Stock as then constituted be issued pursuant to the Merger.

ARTICLE II
REPRESENTATIONS AND WARRANTIES OF MOLYCORP

As used herein "KBI" refers to Kawecki Berylco Industries, Inc., a Pennsylvania corporation, and "CBMM" refers to Companhia Brasileira de Metalurgia e Mineracao, a Brazilian corporation. The term "subsidiary" is defined in Section 8.02, below. Molycorp represents, warrants and agrees as follows, it being understood and agreed that information concerning the business, properties and records of KBI and CBMM and their subsidiaries is furnished to the best of Molycorp's knowledge:

2.01. *Organization, etc.* Molycorp is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. Each of Molycorp, KBI, CBMM, and Molycorp's subsidiaries is duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation or organization and has the corporate power to own its respective properties and to carry on its respective business as now being conducted; and Molycorp has the corporate power to execute and deliver this Agreement and the Agreement of Merger and consummate the transactions contemplated hereby. Molycorp, KBI, and Molycorp's subsidiaries are each duly qualified and licensed and in good standing as a foreign corporation in each jurisdiction set forth with reference to Molycorp and such other corporations, respectively, in Schedule A, constituting each jurisdiction in which such corporation owns or leases real property or maintains an office. Schedule A also correctly identifies each director or other person exercising similar functions of Molycorp, KBI, CBMM, each subsidiary of Molycorp, and each subsidiary of KBI. Schedule A identifies all subsidiaries of Molycorp, KBI and CBMM and the jurisdiction of incorporation of each.

2.02. *Capital Stock of Molycorp.* As of April 30, 1977, the authorized capital stock of Molycorp consists of (i) 5,000,000 shares of Molycorp Common Stock, of which 3,703,142 shares are issued and outstanding, and 45,310 shares are held in the treasury of Molycorp and (ii) 500,000 shares of preferred stock, of which 197,629 shares of \$2.50 Cumulative Convertible Preferred Stock are issued and outstanding. As of the date of this Agreement, there are no outstanding options, warrants or other rights to subscribe for or purchase from Molycorp, or any plans, contracts or commitments providing for the issuance of, or the granting of rights to acquire, any capital stock of Molycorp or securities convertible into or exchangeable for capital stock of Molycorp, except for options issued under the Molycorp 1973 Employees Qualified Stock Option Plan and the various Stock Option Agreements issued pursuant thereto, the 6½% Convertible Subordinated Note and the \$2.50 Cumulative Convertible Preferred Stock. All issued shares of Molycorp Common Stock and \$2.50 Cumulative Convertible Preferred Stock are duly authorized, validly issued and outstanding, and are fully paid and nonassessable. Schedule A previously delivered by Molycorp to Union accurately lists all shares of capital stock reserved for issuance by Molycorp. There are no pre-emptive rights in respect of Molycorp's capital stock. Neither KBI, CBMM, any of their subsidiaries nor any Molycorp subsidiary owns any capital stock of Molycorp or any options, warrants or other rights to subscribe for or purchase any such shares.

2.03. *Capital Stock of Molycorp's Subsidiaries, KBI and CBMM.* Molycorp owns directly or indirectly all of the outstanding capital stock of, and other ownership interests in, the Molycorp subsidiaries, KBI and CBMM referred to in Schedule A, or such lesser amount as is set forth therein, which stock or other ownership interest is validly authorized and issued, is fully paid and nonassessable, and is owned free and clear of liens, claims, options, charges and encumbrances (including any imposed by law in any jurisdiction) except as set forth on such Schedule. Schedule A also accurately lists the record owners, and beneficial owners to the extent known, of all outstanding capital stock and other ownership interests in each Molycorp subsidiary and CBMM not owned directly or indirectly by Molycorp. Molycorp's interest in the Molycorp subsidiaries, KBI and CBMM is not subject to any legal, contractual or other limitations or restrictions, including without limitation, any restrictions on the right to vote or resell the same (including any imposed by law, other than federal or state securities laws, in any jurisdiction) except as described in Schedule A or the agreements referred to therein. Except as described in Schedule A, there are no outstanding options, warrants or other rights to subscribe for or purchase from Molycorp, KBI or CBMM, or any plans, contracts or commitments providing for the issuance of, or the granting of rights to acquire, (i) any capital stock or other ownership interest of the Molycorp subsidiaries, KBI and CBMM or (ii) any

securities convertible into or exchangeable for any of such capital stock or other ownership interest. There are no outstanding contractual obligations of Molycorp, the Molycorp subsidiaries, KBI or CBMM to repurchase, redeem or otherwise acquire any outstanding shares of capital stock or other ownership interests of such corporations, except obligations to honor conversion of convertible securities referred to in Section 2.02 or as disclosed in such Schedule A. Schedule A also accurately lists all shares of capital stock and other ownership interests reserved for issuance by the Molycorp subsidiaries, KBI and CBMM. Except as described in Schedule A, there are no preemptive rights in respect of the capital stock or other ownership interest of the Molycorp subsidiaries, KBI or CBMM.

2.04. *Financial.*

(a) Molycorp has previously furnished Union a true and complete copy of (i) Molycorp's Annual Report on Form 10-K for the fiscal year ended December 31, 1976, which report (the "1976 10-K") includes, among other things, consolidated balance sheets of Molycorp and its subsidiaries as at December 31, 1976 and 1975, the related statements of consolidated income of Molycorp and its subsidiaries for the two years then ended and the consolidated summary of operations of Molycorp and its subsidiaries for the five years ended December 31, 1976, and (ii) Molycorp's Quarterly Report on Form 10-Q for the quarter ended March 31, 1977 (the "First Quarter 10-Q"). The financial statements contained in the 1976 10-K and the consolidated balance sheet and statement of income contained in the First Quarter 10-Q have been prepared in conformity with generally accepted accounting principles, except for information omitted in accordance with the instructions to Form 10-Q, applied, except as otherwise noted therein, on a basis consistent with prior periods. The consolidated balance sheets of Molycorp and its subsidiaries as at December 31, 1976 and 1975 contained in the 1976 10-K fairly present the consolidated financial condition of Molycorp and its subsidiaries as at the dates thereof; the related statements of consolidated income of Molycorp and its subsidiaries contained therein fairly present the results of the operations thereof for the fiscal years then ended; and the consolidated summary of operations of Molycorp and its subsidiaries contained therein fairly summarizes the operations thereof for the five fiscal years ended December 31, 1976. The consolidated balance sheet of Molycorp and its subsidiaries as at March 31, 1977 and 1976 contained in the First Quarter 10-Q fairly presents the financial condition of Molycorp and its subsidiaries as at the dates thereof; and the related statements of consolidated income of Molycorp and its subsidiaries for the 3-month periods ended March 31, 1977 and 1976 contained therein fairly present the results of the operations thereof for the periods indicated, subject in each case to normal year end audit adjustments. For the purposes of this Agreement, all financial statements referred to in this Section 2.04 shall be deemed to include any notes to such financial statements.

(b) Neither Molycorp nor any of its subsidiaries has any liabilities or obligations, either accrued, contingent or otherwise, which, individually or in the aggregate, are material to Molycorp and its consolidated subsidiaries considered as a whole, and which have not been:

(i) reflected in the consolidated balance sheet of Molycorp and its subsidiaries as at December 31, 1976 referred to in Section 2.04(a)(i) (the "Balance Sheet"); or

(ii) specifically described in any of the schedules furnished to Union in connection herewith or in the 1976 10-K; or

(iii) incurred in the ordinary course of business.

The aggregate unfunded pension liability of Molycorp and its subsidiaries is as disclosed in Schedule B referred to in Section 2.04 (c) below.

(c) Except as set forth in Schedule B previously furnished by Molycorp to Union or described in the 1976 10-K, there are no claims against or liabilities or obligations of, or any reasonable legal basis known to Molycorp for any claims against or liabilities or obligations of Molycorp or any of its subsidiaries or KBI or CBMM which, individually or in the aggregate might result in or cause any material adverse change in the consolidated financial condition or results of operations of Molycorp and its subsidiaries.

(d) Except as set forth in Schedule B or in the 1976 10-K, there has not been, occurred or arisen since December 31, 1976, whether or not in the ordinary course of business:

(i) any material adverse change in the financial condition or in the results of operations of Molycorp and its subsidiaries considered as a whole, from that shown on the Balance Sheet; or

(ii) any damage or destruction in the nature of a casualty loss, whether covered by insurance or not, materially and adversely affecting any property or business of Molycorp or any of its subsidiaries which is material to the consolidated financial condition or results of operations of Molycorp and its subsidiaries; or

(iii) any material increase (except in accordance with past pattern or practice) in the compensation payable or to become payable by Molycorp or any of its subsidiaries pursuant to employment agreements with officers or salaried employees of Molycorp or any of its subsidiaries whose 1976 annual remuneration exceeded \$40,000, or in any bonus, insurance, pension or other benefit plan made for or with any of such officers or employees; or

(iv) any actual or, to the knowledge of Molycorp, any threatened, strike or other labor trouble or dispute which materially and adversely affects, or which insofar as Molycorp knows might materially and adversely affect, the business or prospects of Molycorp, KBI or CBMM taken together with their subsidiaries; or

(v) any other event, condition or state of facts of any character (but not including general economic or political conditions affecting the mining industry or industrial companies in the United States) which materially and adversely affects, or threatens to materially and adversely affect, the results of operations or business or financial condition or prospects of Molycorp and its subsidiaries considered as a whole.

Molycorp and its subsidiaries have not engaged in any transaction material to Molycorp and such subsidiaries considered as a whole not in the ordinary course of its business since December 31, 1976, except as set forth in such Schedule B or described in the 1976 10-K.

(e) Molycorp has previously furnished Union a true and complete copy of (i) KBI's Annual Report on Form 10-K for the fiscal year ended December 31, 1976, which report (the "KBI 10-K") includes, among other things, consolidated balance sheets of KBI and its subsidiaries as at December 31, 1976 and 1975, the related statements of consolidated income of KBI and its subsidiaries for the two years then ended and the consolidated summary of operations of KBI and its subsidiaries for the five years ended December 31, 1976, and (ii) KBI's Quarterly Report on Form 10-Q for the quarter ended March 31, 1977 (the "KBI 10-Q"). The financial statements contained in the KBI 10-K and the consolidated balance sheet and statement of income contained in the KBI 10-Q have been prepared in conformity with generally accepted accounting principles, except for information omitted in accordance with the instructions to Form 10-Q, applied on a basis consistent with prior periods. The consolidated balance sheets of KBI and its subsidiaries as at December 31, 1976 and 1975 contained in the KBI 10-K fairly present the consolidated financial condition of KBI and its subsidiaries as at the dates thereof; the related statements of consolidated income of KBI and its subsidiaries contained therein fairly present the results of the operations thereof for the fiscal years then ended; and the consolidated summary of operations of KBI and its subsidiaries contained therein fairly summarizes the operations thereof for the five fiscal years ended December 31, 1976. The consolidated balance sheet of KBI and its subsidiaries as at March 31, 1977 and 1976 contained in the KBI 10-Q fairly presents the financial condition of KBI and its subsidiaries as at the dates thereof; and the related statements of consolidated earnings of KBI and its subsidiaries for the 3-month periods ended March 31, 1977 and 1976 contained therein fairly present the results of operations thereof for the periods indicated, subject in each case to normal year end audit adjustments. For the purposes of this Agreement, all financial statements referred to in this Section 2.04(e) shall be deemed to include any notes to such financial statements.

(f) Neither KBI nor any of its subsidiaries or affiliates has any liabilities or obligations, either accrued, contingent or otherwise, which, individually or in the aggregate, are material to KBI and its consolidated subsidiaries considered as a whole, and which have not been:

(i) reflected in the consolidated balance sheet of KBI and its subsidiaries as at December 31, 1976 referred to in Section 2.04(e)(i) (the "KBI Balance Sheet"); or

(ii) specifically described in Schedule B-1 furnished to Union in connection herewith or in the KBI 10-K; or

(iii) incurred in the ordinary course of business.

The aggregate unfunded pension liability of KBI and its subsidiaries is as disclosed in Schedule B-1.

(g) Except as set forth in Schedule B-1 previously furnished by Molycorp to Union, there are no claims against or liabilities or obligations of, or any reasonable legal basis known to Molycorp for any claims against or liabilities or obligations of KBI or any of its subsidiaries which, individually or in the aggregate might result in or cause any material adverse change in the consolidated financial condition or results of operations of KBI.

(h) Except as set forth in Schedule B-1 or in the KBI 10-K, there has not been, occurred or arisen since December 31, 1976, whether or not in the ordinary course of business:

(i) any material adverse change in the financial condition or results of operations of KBI and its consolidated subsidiaries from that shown on the KBI Balance Sheet; or

(ii) any damage or destruction in the nature of a casualty loss, whether covered by insurance or not, materially and adversely affecting any property or business of KBI or any of its subsidiaries which is material to the financial condition or results of operations of KBI or any of its consolidated subsidiaries; or

(iii) any other event, condition or state of facts of any character (but not including general economic or political conditions affecting industrial companies in the United States) which materially and adversely affects, or threatens to materially and adversely affect, the results of operations or business or financial condition or prospects of KBI and its subsidiaries considered as a whole.

KBI and its consolidated subsidiaries have not engaged in any transaction material to KBI and such subsidiaries taken as a whole not in the ordinary course of its business since December 31, 1976, except as set forth in such Schedule B-1 or described in the KBI 10-K.

(i) Molycorp has previously furnished Union a true and complete copy of (i) CBMM's financial statements included in Molycorp's 1976 10-K for the fiscal year ended December 31, 1976, which financial statements (the "CBMM financial statements") include, among other things, consolidated balance sheets of CBMM and its subsidiaries as at December 31, 1976 and 1975, and the related statements of consolidated income of CBMM and its subsidiaries for the two years then ended and (ii) CBMM's Quarterly Report for the quarter ended March 31, 1977 (the "CBMM Quarterly Report"). CBMM's financial statements have been prepared in conformity with United States generally accepted accounting principles applied, except as otherwise noted therein, on a basis consistent with prior periods. The consolidated balance sheets of CBMM and its subsidiaries as at December 31, 1976 and 1975 fairly present the consolidated financial condition of CBMM and its subsidiaries as at the dates thereof and the related statements of consolidated income of CBMM and its subsidiaries contained therein fairly present the results of the operations thereof for the fiscal years then ended. The statements of consolidated income of CBMM and its subsidiaries for the 3-month periods ended March 31, 1977 and 1976 contained in the CBMM quarterly report fairly present the results of the operations thereof for the periods indicated, subject in each case to normal year end audit adjustments. For the purposes of this Agreement, all financial statements referred to in this Section 2.04(i) shall be deemed to include any notes to such financial statements.

(j) Neither CBMM nor any of its subsidiaries has any liabilities or obligations, either accrued, contingent or otherwise, which, individually or in the aggregate, are material to CBMM and its consolidated subsidiaries considered as a whole, and which have not been:

(i) reflected in the consolidated balance sheet of CBMM and its subsidiaries as at December 31, 1976 referred to in Section 2.04(i) (the "CBMM Balance Sheet"); or

(ii) specifically described in Schedule B-2 furnished to Union in connection herewith; or

(iii) incurred in the ordinary course of business.

(k) Except as set forth in Schedule B-2 or in the 1976 10-K, there are no claims against or liabilities or obligations of, or any reasonable legal basis known to Molycorp for any claims against or liabilities or obligations of CBMM or any of its subsidiaries which, individually or in the aggregate, might result in or cause any material adverse change in the consolidated financial condition or results of operations of CBMM.

(l) Except as set forth in Schedule B-2 or in the 1976 10-K, there has not been, occurred or arisen since December 31, 1976, whether or not in the ordinary course of business:

(i) any material adverse change in the financial condition or results of operations of CBMM and its consolidated subsidiaries considered as a whole, from that shown on the CBMM Balance Sheet; or

(ii) any damage or destruction in the nature of a casualty loss, whether covered by insurance or not, materially and adversely affecting any property or business of CBMM or any of its subsidiaries which is material to the financial condition or results of operations of CBMM and its subsidiaries considered as a whole; or

(iii) any other event, condition or state of facts of any character (but not including general economic or political conditions affecting the mining industry or industrial companies in the Western Hemisphere) which materially and adversely affects, or threatens to materially and adversely affect, the results of operations or business or financial condition or prospects of CBMM and its subsidiaries considered as a whole.

CBMM and its consolidated subsidiaries have not engaged in any transaction material to CBMM and such subsidiaries taken as a whole not in the ordinary course of its business since December 31, 1976, except as set forth in such Schedule B-2.

2.05. *Tax and Other Returns and Reports.*

(a) Except as set forth in Schedule C previously furnished by Molycorp to Union, (i) all federal, state, foreign and material local tax returns and tax reports required to be filed by Molycorp, its subsidiaries, KBI, CBMM or any of them, have been filed with the appropriate governmental agencies in all jurisdictions in which such returns and reports are required to be filed, (ii) all federal, state, foreign and material local income, profits, franchise, sales, use, occupation, property, severance, production, mining, excise and other taxes (including interest and penalties) due from Molycorp, KBI, CBMM and their subsidiaries (a) have been fully paid or adequately provided for on the books and consolidated financial statements of Molycorp, KBI or CBMM, or (b) are being contested in good faith by appropriate proceedings and are not material on a consolidated basis to Molycorp, KBI and CBMM, respectively, (iii) no issues have been raised (and are currently pending) by the Internal Revenue Service or any other taxing authority in connection with any of the returns and reports referred to in the foregoing clause (i) which, individually or in the aggregate might have a material adverse effect on a consolidated basis on Molycorp, KBI or CBMM, respectively, (iv) no waivers of statutes of limitation have been given or requested with respect to Molycorp, KBI, CBMM or any of their subsidiaries, (v) the United States and Brazilian federal income tax returns of Molycorp, KBI and CBMM have been examined by the Internal Revenue Service or its foreign counterpart, for all periods to and including those set forth in such Schedule C, and except as and to the extent shown on such Schedule, all deficiencies asserted or assessments made as a result of examinations by any taxing authorities have been fully paid or fully reflected on the books of Molycorp, KBI or CBMM, respectively and (vi) neither Molycorp, KBI nor CBMM (a) is a "consenting corporation" within the provisions of Section 341(f) of the Code or (b) has entered into any closing or similar agreement with any federal, state, local or foreign taxing jurisdiction.

(b) Neither Molycorp, KBI, CBMM nor their subsidiaries is subject to any penalty by reason of a violation of any order, rule or regulation of, or a default with respect to any return or report (other than a tax return or report as set forth on Schedule C) required to be filed with, any federal, state, local, foreign or

other governmental agency, department, commission, board, bureau or instrumentality to which it is subject, which violations or defaults, individually or in the aggregate, might have a material adverse effect on the consolidated financial condition or results of operations of Molycorp, KBI or CBMM.

2.06. *Mineral Properties.* Except as supplemented by Schedule D, the 1976 10-K accurately sets forth the estimated proven and probable mineral reserves of Molycorp at the Questa and Mountain Pass properties and of CBMM at the Araxa property (each such mineral property being severally a "Mine" and collectively the "Mines"). Schedule D previously delivered by Molycorp to Union accurately sets forth, with respect to each of the Mines, whether owned, leased or otherwise available as of right, the effective net undivided interest of Molycorp and CBMM therein and information with respect to sales for the fiscal years 1972 through 1976. Schedule D accurately sets forth with respect to each of the Mines, revenues, costs and expenses, profit and cash flow for each of the last five fiscal years. Schedule D accurately sets forth information with respect to other mineral interests of Molycorp and CBMM which are not part of a Mine ("Mineralized Areas"). Schedule D accurately indicates all mortgages, production payments or other burdens imposed upon any of the Mines or Mineralized Areas. Neither Molycorp, any of its subsidiaries, nor CBMM owns any material royalties, over-riding royalties or other mineral interests except for those set forth in Schedule D. Except as set forth in Schedule D or the 1976 10-K, Molycorp, CBMM or their subsidiaries have all water rights and other ancillary rights necessary to support the operations of, and the sales and dispositions of production from, the Mines. All estimates of mineral reserves, mineral interests and similar matters contained in Schedule D or the 1976 10-K have been prepared in accordance with accepted engineering or mining practices by persons qualified to make such estimates.

2.07. *Title to Properties.*

(a) Schedule E previously delivered by Molycorp to Union accurately sets forth with respect to each of the properties which is material to Molycorp, KBI, CBMM and their respective subsidiaries, in each case taken as a whole, together with the equipment, buildings and appurtenances necessary to the operation of such properties (herein the "Principal Properties") (A) a list of all leases, franchises and similar agreements creating, modifying or altering rights to minerals and material to the property interest of Molycorp, KBI, CBMM, and their respective subsidiaries, in each case taken as a whole, in any such Principal Property in which such interest is not ownership in fee and (B) all indebtedness secured by a mortgage, lien, pledge, restriction, charge or encumbrance on any such Principal Property, specifying the nature thereof, including, where appropriate, the original principal amount thereof, the person to whom owed and the unpaid balance and rate of interest (if any), provided however that such Schedule need not list or describe any information listed or described on Schedule D. Each of Molycorp, KBI, CBMM and their subsidiaries (i) own all leasehold estates, charter rights and other rights purported to be granted by the agreements, contracts and commitments listed in Schedule D or E, each of which is in full force and effect without any material default, waiver or indulgence thereunder by Molycorp or to its knowledge by any other party thereto except as set forth in such Schedule, (ii) has title or other interests adequate for the operations of the Mines and (iii) has good and marketable title to all Principal Properties owned by it which are not mineral properties in each case free and clear of all mortgages, liens, pledges, restrictions, charges or encumbrances of any nature whatsoever except:

(x) liens for taxes, assessments or governmental charges or levies if the same shall not at the time be delinquent or thereafter can be paid without penalty, or are being contested in good faith and by appropriate proceedings;

(y) such imperfections of title and encumbrances, if any, as do not materially detract from the value of, or materially interfere with the present use of, such property; and

(z) as shown on such Schedule D or Schedule E.

(b) Except as set forth in Schedule E or disclosed in the 1976 10-K, neither Molycorp, KBI, CBMM nor any of their subsidiaries has received notice of violation of any material regulation, ordinance, law, order, or other requirement relating to any Principal Property. Except as so set forth, to the best of Molycorp's knowledge there are no changes in any of the foregoing requirements affecting any Principal Property pending or threatened, which might prohibit Molycorp, KBI, CBMM or their subsidiaries from continuing, or which might materially curtail, the present use of such property or from using such property for the purpose for which it was acquired.

2.08. *Agreements, Contracts and Commitments.* Except as set forth in the 1976 10-K, the KBI 10-K or in Schedule F previously delivered by Molycorp to Union or in any other Schedule previously delivered by Molycorp to Union pursuant to this Agreement, neither Molycorp nor any of its subsidiaries nor KBI nor any of its subsidiaries has (i) any collective bargaining agreements, or any agreements that contain any severance pay liabilities or obligations, (ii) any bonus, deferred compensation, pension, profit-sharing, stock option, employee stock purchase or retirement plans, or any other employee benefit plans or arrangements, (iii) any employment or consulting agreement, contract or commitment with an employee or consultant firm or other organization having a term of two years or more from the date hereof or containing an obligation to pay and/or accrue more than \$100,000 per annum, or (iv) any lease having a term in excess of one year (as lessor or lessee) other than leases of oil, gas or mineral interests, note (other than any note representing indebtedness between Molycorp and any consolidated subsidiary) or bond or indenture which involves a potential liability of more than \$500,000 or any agreement of guarantee or indemnification (other than rights of indemnification to which officers, directors, employees and agents may be entitled by reason of the laws of any state, the by-laws or the certificate of incorporation) running to any person or entity other than a consolidated subsidiary of Molycorp which involves, singly or in the aggregate, a potential liability of more than \$500,000. Except as set forth in the 1976 10-K or in Schedule F or in any other Schedule previously delivered by Molycorp to Union pursuant to this Agreement, neither Molycorp, KBI, CBMM or any of their subsidiaries has (i) any agreement, contract or commitment which is presently expected to have a material adverse impact on the financial condition or results of operations of Molycorp, KBI or CBMM, and their subsidiaries, in each case taken as a whole, (ii) any agreement, contract or commitment containing any covenant limiting the freedom of Molycorp, KBI or CBMM to engage in any line of business or compete with any person, (iii) any agreement, contract or commitment relating to capital expenditures and involving future payments which, together with future payments under all other agreements, contracts or commitments relating to the same capital project, exceed \$500,000, (iv) any agreement, contract or commitment relating to the acquisition of assets of, or any interest in, any business enterprise for a price of \$500,000 or more, or relating to the disposition of assets (other than contracts for the sale of products in the ordinary course of business) having a fair market value of \$500,000 or more, or (v) any other agreement, contract or commitment (except agreements, contracts or commitments between Molycorp, KBI or CBMM and their respective subsidiaries) which involves \$500,000 or more and is not cancellable without penalty within 30 days. Except as set forth in Schedule F, neither Molycorp, any of its subsidiaries, KBI nor CBMM has breached, nor has any such entity received in writing any claim that it has breached, any of the terms or conditions of (x) any agreement, contract or commitment set forth in any of the schedules heretofore delivered by Molycorp to Union pursuant to this Agreement in such manner as would permit any other party to cancel or terminate the same or (y) any agreement, contract or commitment (including those referred to in clause (x)) if any such breach or breaches singly or in the aggregate could materially and adversely affect the financial condition or results of operations of Molycorp, KBI or CBMM and their respective subsidiaries, in each case considered as a whole. Each agreement, contract or commitment set forth in any schedule delivered to Union pursuant to this Agreement is, except as otherwise noted on such schedule, in full force and effect and is not subject to any material default by any party thereto. The fiscal year of each of the employee pension benefit plans maintained by Molycorp, KBI or their subsidiaries which is subject to the minimum funding standards of the Employee Retirement Income Security Act of 1974 ("ERISA") is as indicated in Schedule F after the name of each plan. Except as described in Schedule F, neither Molycorp, KBI nor any of their subsidiaries has established any new employee pension benefit plan subject to the minimum funding standards of ERISA since January 1, 1974. Except as noted in Schedule F, since June 30, 1974, no employee pension benefit plan maintained by Molycorp, KBI or their subsidiaries which is subject to Title IV of ERISA has been terminated by the plan administrator thereof or by the Pension Benefit Guaranty Corporation; no proceedings to terminate any such plan have been instituted within the meaning of Subtitle C of said Title IV; and, except as described in Schedule B, no reportable event within the meaning of Section 4043 of said Subtitle C has occurred with respect to any such plan.

2.09. *No Breach of Statute or Contract; Governmental Authorizations; Required Consents.*

(a) Subject to the approvals referred to in Section 4.02 hereof or as set forth in Schedule F or Schedule G previously furnished by Molycorp to Union, neither the execution and delivery of this

Agreement or the Agreement of Merger by Molycorp, nor compliance by Molycorp or any of its subsidiaries with the terms and provisions of this Agreement or the Agreement of Merger, will conflict with or result in a breach of any of the terms, conditions or provisions of the charter, By-Laws or other governing instruments of Molycorp, KBI, CBMM or any of Molycorp's subsidiaries, or any statute, judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign, to which Molycorp, KBI, CBMM or any of Molycorp's subsidiaries is subject or of any agreement, contract or commitment listed on any schedule previously delivered by Molycorp to Union pursuant to this Agreement or of any other agreement, contract or commitment to which Molycorp, KBI, CBMM or any of their subsidiaries is a party and which is material to the consolidated financial condition or the results of operations of Molycorp, KBI, or CBMM, respectively, or constitute a material default thereunder, or give to others any interest or rights, including rights of termination, cancellation or acceleration, in or with respect to any of the Principal Properties of Molycorp, KBI, CBMM or any of their subsidiaries or with respect to any of such agreements, contracts or commitments, or otherwise require the consent or approval of any person.

(b) Except as described in the 1976 10-K or on Schedule E hereto, neither Molycorp, KBI, CBMM nor any of Molycorp's subsidiaries is in violation of any applicable law, statute, order, rule or regulation promulgated or judgment entered (or known by Molycorp to be proposed and considered likely to be adopted) by any federal, state, local or foreign court or governmental authority relating to the operation, conduct or ownership of the property or business of Molycorp, KBI, CBMM or any of Molycorp's subsidiaries, which violations might have a material adverse effect, individually or in the aggregate, on the consolidated financial condition or results of operations of Molycorp, KBI or CBMM, respectively.

(c) Except as set forth on Schedule D or Schedule E or in the 1976 10-K, Molycorp and CBMM hold each federal, state, local or foreign governmental consent, license, permit, grant or other authorization pursuant to which Molycorp or CBMM or any of their subsidiaries currently operates or holds any interest in any Mine and which is material to the operation or holding of any such interest (herein collectively called "Authorizations") which Authorizations are in full force and effect and constitute all Authorizations required to permit Molycorp or any of its subsidiaries or CBMM to operate or conduct the business of or hold any interest in any existing Mine both currently and immediately following the effective time of the Merger. Schedule H lists all Authorizations which may materially restrict the present output or any presently contemplated expansion of any Principal Properties including any limitations on the term of possession or operation of any such properties, or which are in the nature of a confiscatory or excess profits tax or nationalization act and which may be applicable to such properties, or which control the transfer price of any mineral or mineral product. Molycorp has no reasonable ground to believe that any of the foregoing Authorizations will not in the ordinary course be renewable except as described in the 1976 10-K upon its expiration, or that the Merger will make it more difficult to renew or obtain any of the foregoing Authorizations, or any Authorizations with respect to any Mineralized Area. Anything hereinabove to the contrary notwithstanding, it is understood and agreed that the foregoing shall not be deemed inaccurate by reason of the ordinary expiration of routine Authorizations, the renewal of which is expected to be obtained in the ordinary course without interruption of existing operations. Except as described in the 1976 10-K or on Schedule H hereto, neither Molycorp, CBMM nor any of their subsidiaries has breached, nor has any such entity received in writing any claim or assertion that Molycorp, CBMM or any of their subsidiaries has breached, any of the terms or conditions of any federal, state, local or foreign governmental consent, license, permit, grant or other authorization pursuant to which Molycorp, CBMM or any of their subsidiaries currently operates or holds any interest in any Mine in such manner (x) as would permit any other party to cancel or terminate any Authorization or (y) that any such breach or breaches singly or in the aggregate could materially and adversely affect the consolidated financial condition or results of operations of Molycorp.

2.10. *No Litigation or Adverse Events.*

(a) Schedule I previously delivered by Molycorp to Union accurately lists all suits, actions and legal, administrative, arbitration or other proceedings and governmental investigations and all other controversies, pending or as to which Molycorp or any of its subsidiaries has received in writing any claim or assertion, not described in the 1976 10-K and which involve a potential liability of Molycorp or any of its

subsidiaries of more than \$500,000 or which might, individually or in the aggregate, materially and adversely affect the consolidated financial condition or results of operations of Molycorp.

(b) Schedule I accurately lists all suits, actions and legal, administrative, arbitration or other proceedings and governmental investigations and all other controversies, pending or as to which KBI or any of its subsidiaries has received in writing any claim or assertion, not described in the KBI 10-K and which involve a potential liability to KBI or any of its subsidiaries of more than \$500,000 or which might, individually or in aggregate, materially and adversely affect the consolidated financial condition or results of operations of KBI.

(c) Schedule I accurately lists all suits, actions and legal, administrative, arbitration or other proceedings and governmental investigations and all other controversies, pending or as to which CBMM or any of its subsidiaries has received in writing any claim or assertion, not described in the 1976 10-K and which involve a potential liability to CBMM or any of its subsidiaries of more than U. S. \$500,000 or which might, individually or in the aggregate, materially and adversely affect the consolidated financial condition or results of operations of CBMM.

2.11. *Patents, Trademarks, etc.* Schedule J previously furnished by Molycorp to Union accurately lists all domestic and foreign letters patent, patents, patent applications, patent and know-how licenses, and formulae used or proposed to be used by Molycorp or KBI and believed by Molycorp to be material to their respective operations. Unless otherwise indicated in such Schedule J, Molycorp or KBI owns the entire right, title and interest in and to the same. Such Schedule J also accurately sets forth all domestic and foreign letters patent, patents, patent applications, and patent and know-how licenses, which relate to the business of Molycorp or KBI and which are owned or controlled by any director, officer or employee of Molycorp or KBI. All letters patent, patents, patent applications, patent and know-how licenses, and formulae listed in such Schedule are subject to no pending or, to the best of the knowledge of Molycorp, threatened litigation or other adverse claims except as set forth in said Schedule. To the best of Molycorp's knowledge, there has been no infringement by Molycorp or KBI or any of their subsidiaries of any domestic or foreign letters patent, patent of another, or any claim or assertion that Molycorp or KBI or any of their subsidiaries engaged in any such infringement.

2.12. *Authorization of Agreement.* The execution and delivery and, subject to requisite stockholder approval, the performance of this Agreement and the Agreement of Merger by Molycorp have been duly and validly authorized and approved by the Board of Directors of Molycorp, and Molycorp has taken, or will use its best efforts to take, prior to the Time of Filing, all action required by law, its Certificate of Incorporation and By-Laws and all other action required to authorize the execution, delivery and performance of this Agreement and the Agreement of Merger.

2.13. *Registration Statement and Proxy Statement.* When the Registration Statement referred to in Section 4.04 or any post-effective amendment thereto shall become effective, and when the Proxy Statement referred to in Section 4.04 or any amendment or supplement thereto shall be mailed to holders of securities of Molycorp, and at all times subsequent to such effectiveness or mailing up to and including the effective time of the Merger, such Registration Statement and such Proxy Statement and all amendments or supplements thereto, with respect to all information set forth therein relating to Molycorp, KBI, CBMM and their respective subsidiaries and in respect of the Agreement and the Agreement of Merger, (i) will comply in all material respects with the provisions of the Securities Act of 1933, as amended (the "Securities Act"), and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations of the Securities and Exchange Commission (the "SEC") thereunder and (ii) will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements contained therein not misleading.

2.14. *Brokers' or Finders' Fees, etc.* No agent, broker, investment banker, person or firm acting on behalf of Molycorp or any of its subsidiaries or under the authority of any of them is or will be entitled to any broker's or finder's fee or any other commission or similar fee directly or indirectly from any of the parties hereto in connection with any of the transactions contemplated herein. Blyth Eastman Dillon & Co. will be entitled to a fee for their evaluation of Union's Common Stock, which fee and related expenses will be paid by Molycorp.

the consolidated financial condition of Union and its subsidiaries as at the dates thereof; the related statements of consolidated income of Union and its subsidiaries contained therein fairly present the results of the operations thereof for the fiscal years then ended; and the consolidated summary of operations of Union and its subsidiaries contained therein fairly summarizes the operations thereof for the five fiscal years ended December 31, 1976. The consolidated balance sheet of Union and its subsidiaries as at March 31, 1977 and 1976 contained in the Union 10-Q fairly presents the financial position of Union and its subsidiaries as at the dates thereof; and the related statements of consolidated earnings of Union and its subsidiaries for the 3-month periods ended March 31, 1977 and 1976 contained therein fairly present the results of the operations thereof for the periods indicated, subject in each case to normal year end audit adjustments. For the purposes of this Agreement, all financial statements referred to in this Section 3.04 shall be deemed to include any notes to such financial statements.

(b) Neither Union nor any of its subsidiaries or affiliates has any liabilities or obligations, either accrued, contingent or otherwise, which, individually or in the aggregate, are material to Union and its consolidated subsidiaries considered as a whole, and which have not been:

- (i) reflected in the consolidated balance sheet of Union and its subsidiaries as at December 31, 1976 referred to in Section 3.04(a)(i) (the "Balance Sheet"); or
- (ii) specifically described in any schedule furnished to Molycorp in connection herewith; or
- (iii) incurred in the ordinary course of business.

Union's obligations with respect to pension liabilities are as disclosed in the Union 10-K.

(c) Except as set forth in Schedule 2, previously furnished by Union to Molycorp, or as described in the Union 10-K or the Union 10-Q, there are no claims against or liabilities or obligations of, or any reasonable legal basis known to Union for any claims against or liabilities or obligations of Union or any of its subsidiaries which, individually or in the aggregate might result in or cause any material adverse change in the consolidated financial condition or results of operations of Union and its subsidiaries.

(d) Except as set forth in Schedule 3 previously furnished by Union to Molycorp, or in the Union 10-K or the Union 10-Q, there has not been, occurred or arisen since December 31, 1976, whether or not in the ordinary course of business:

(i) any material adverse change in the financial condition or results of operations of Union and its subsidiaries considered as a whole, from that shown on the Balance Sheet; or

(ii) any damage or destruction in the nature of a casualty loss, whether covered by insurance or not, materially and adversely affecting any property or business of Union or any of its subsidiaries which is material to the consolidated financial condition or results of operations of Union and its subsidiaries; or

(iii) any actual or, to the knowledge of Union, any threatened, strike or other labor trouble or dispute which materially and adversely affects, or which insofar as Union knows might materially and adversely affect, the business or prospects of Union and its subsidiaries considered as a whole; or

(iv) any other event, condition or state of facts of any character (but not including general economic or political conditions affecting the petroleum industry or industrial companies in the United States) which materially and adversely affects, or threatens to materially and adversely affect, the results of operations or business or financial condition or prospects of Union and its subsidiaries considered as a whole.

Union and its subsidiaries have not engaged in any transaction material to Union and such subsidiaries, taken as a whole, not in the ordinary course of its business since December 31, 1976, except as set forth in such Schedule 3.

3.05. *Status of Union Common Stock.* The shares of Union Common Stock to be issued to the stockholders of Molycorp pursuant to this Agreement and the Agreement of Merger, when so issued, will be duly and validly authorized and issued, fully paid and nonassessable.

3.06. *No Breach of Statute or Contract; Governmental Authorizations; Required Consents.* Neither the execution and delivery of this Agreement by Union and Subsidiary or the Agreement of Merger by Subsidiary, nor compliance with the terms and provisions of this Agreement by Union and Subsidiary and the Agreement of Merger by Subsidiary will conflict with or result in a breach of any of the terms, conditions or provisions of the certificate of incorporation or By-Laws of Union or any of its subsidiaries or any judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign to which Union or any of its subsidiaries is subject or of any agreement, contract or commitment to which Union or any Principal Entity is a party and which is material to the financial condition or the results of operations of Union or the financial condition or the results of operations of Union and its subsidiaries considered as a whole, or constitute a material default thereunder, or give to others any interest or rights, including rights of termination, cancellation or acceleration, in or with respect to any of such agreements, contracts or commitments, or otherwise require the consent or approval of any person.

3.07. *No Litigation or Adverse Events.* There is no suit, action, or legal, administrative, arbitration or other proceeding or governmental investigation, pending or as to which Union or any of its subsidiaries has received in writing any claim or assertion, which might, individually or in the aggregate, materially and adversely affect the financial condition or results of operations of Union and its subsidiaries considered as a whole, except as set forth in Schedule 2 previously furnished by Union to Molycorp.

3.08. *Authorization of Agreement.* The execution and delivery and, subject to requisite approval by Union, the performance of this Agreement and the Agreement of Merger by Subsidiary (and, in the case of this Agreement, by Union), have been duly and validly authorized and approved by the Boards of Directors of Union and Subsidiary and Union and Subsidiary have taken, or will use their best efforts to take prior to the Time of Filing, all action required by law, their respective Certificates of Incorporation and By-Laws and all other action required to authorize the execution, delivery and performance of this Agreement and the Agreement of Merger.

3.09. *Registration Statement and Proxy Statement.* When the Registration Statement referred to in Section 4.04 or any post-effective amendment thereto shall become effective, and when the Proxy Statement referred to in Section 4.04 or any amendment or supplement thereto shall be mailed to holders of securities of Molycorp, and at all times subsequent to such effectiveness or mailing up to and including the effective time of the Merger, such Registration Statement and such Proxy Statement and all amendments or supplements thereto, with respect to all information set forth therein relating to Union and Subsidiary and in respect to all information set forth therein relating to this Agreement and the Agreement of Merger, (i) will comply in all material respects with the provisions of the Securities Act and the Exchange Act, respectively, and the rules and regulations of the SEC thereunder and (ii) will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements contained therein not misleading.

3.10. *Brokers' or Finders' Fees, etc.* No agent, broker, investment banker, person or firm acting on behalf of Union or any of its subsidiaries or under the authority of any of them is or will be entitled to any broker's or finder's fee or any other commission or similar fee directly or indirectly from any of the parties hereto in connection with any of the transactions contemplated herein. Dillon, Read & Co. Inc. will be entitled to a fee for providing certain financial and investment advice, which fee and related expenses will be paid by Union.

3.11. *Copies of Documents.* Union has made available for inspection and copying by Molycorp true and correct copies of all documents referred to in this Article III or in any schedule delivered by Union to Molycorp pursuant to this Agreement.

3.12. *Report on Form 10-K.* The information included in the Union 10-K previously delivered by Union to Molycorp is true and correct in all material respects and does not contain any material untrue statement of fact or omit to state any material fact necessary to make the statements made therein not misleading.

ARTICLE IV

CONDUCT AND TRANSACTIONS PRIOR TO EFFECTIVE TIME OF MERGER

4.01. *Investigations; Operation of Business of Molycorp and Union.* Between the date of this Agreement and the effective time of the Merger:

(a) Molycorp and Union each agrees to use its best efforts to give to the other and to the other's representatives and agents full access to all the premises and books and records of it and its subsidiaries (and, in the case of Molycorp, KBI and CBMM and their subsidiaries) and to cause its and its subsidiaries' (and, in the case of Molycorp, KBI's and CBMM's and their subsidiaries') officers to furnish the other with such financial and operating data and other information with respect to the business and properties of it and its subsidiaries (and, in the case of Molycorp, KBI and CBMM and their subsidiaries) as the other shall from time to time request; provided, however that any such investigation (i) shall be conducted in such manner as not to interfere unreasonably with the operation of the business of the other and the other's subsidiaries (and, in the case of Molycorp, KBI and CBMM and their subsidiaries) and (ii) shall not affect any of the representations and warranties hereunder. In the event of termination of this Agreement, Molycorp and Union will each return to the other all documents, work papers and other material obtained from the other and the other's subsidiaries (and, in the case of Molycorp, KBI and CBMM and their subsidiaries) in connection with the transactions contemplated hereby and will take such other steps in regard to the confidentiality of such material as have been mutually agreed upon by Molycorp and Union.

(b) Molycorp will use its best efforts to, and to cause CBMM to, preserve substantially intact each of their respective business organizations, to keep available the services of their present officers and employees, and to preserve their present relationships with persons having significant business relations therewith.

(c) Molycorp and its subsidiaries and, to the extent that the same is within Molycorp's control, CBMM, shall conduct their respective businesses only in the ordinary course and, by way of amplification and not limitation, neither Molycorp nor any of its subsidiaries nor CBMM will, without the prior written consent of Union, (i) issue or commit to issue any capital stock or other ownership interest except pursuant to outstanding options, warrants or convertible securities referred to in Sections 2.02 and 2.03, including Schedule A referred to therein, or (ii) grant or commit to grant any options (other than pursuant to any existing stock option plans), warrants, or other rights to subscribe for or purchase or otherwise acquire any shares of its capital stock or other ownership interest or issue or commit to issue any securities convertible into or exchangeable for shares of its capital stock or other ownership interest, or (iii) declare, set aside, or pay any dividend or distribution with respect to the capital stock or other ownership interest (except for quarterly cash dividends on Molycorp Common Stock at a rate per share not greater than the \$.30 per share paid during the quarter ended March 31, 1977, regular quarterly dividends on the Molycorp \$2.50 Cumulative Convertible Preferred Stock and any dividends which may be paid by CBMM), or (iv) directly or indirectly redeem, purchase or otherwise acquire or commit to acquire any capital stock or other ownership interest of Molycorp (other than the \$2.50 Cumulative Convertible Preferred Stock), CBMM or Union or directly or indirectly terminate or reduce or commit to terminate or reduce any bank line of credit or the availability of any funds under any other loan or financing agreement, or (v) effect a split or reclassification of any capital stock of Molycorp or any of its subsidiaries or CBMM or a recapitalization of Molycorp or any of its subsidiaries, or CBMM, or (vi) change the charter, by-laws or other governing instruments of Molycorp or any of its subsidiaries, or CBMM, or (vii) borrow or agree to borrow any funds (except borrowings by wholly-owned subsidiaries from their parent corporations or borrowings pursuant to existing bank lines of credit) or guarantee or agree to guarantee the obligations of others, or (viii) waive or commit to waive any rights of substantial value, or (ix) enter into an agreement, contract or commitment involving more than \$50,000 which, if entered into prior to the date of this Agreement, would be required to be listed in a schedule delivered to Union pursuant to the terms of this Agreement (other than contracts entered into in the ordinary course of business for the delivery of products within a period of two years from the date thereof and other than any contract relating to capital expenditures and involving payments which, together with

future payments under all other contracts entered into after the date hereof relating to the same capital project, exceed \$500,000) or (x) make or agree to make any increase in the compensation payable to any officer or Director of Molycorp except in accordance with past pattern or practice.

(d) Molycorp will use its best efforts to cause KBI to preserve the value of its business and properties. Molycorp shall advise and consult with Union in advance concerning any proposed action or transaction involving KBI and requiring approval of the KBI Board of Directors or shareholders, if such action or transaction is material to KBI and is not in the ordinary course of KBI's business. However, nothing herein shall require Molycorp to disclose to Union confidential information of KBI if such disclosure would violate any fiduciary obligation of Molycorp or any of its officers or Directors to KBI.

(e) Union will not declare, set aside or pay any dividend or distribution with respect to Union Common Stock except for dividends in cash not exceeding the regular dividend rate fixed from time to time or, subject to the provisions of Article I, Union Common Stock.

4.02. *Stockholder Approvals.* Subsidiary and Molycorp agree to submit this Agreement and the Agreement of Merger to their respective stockholders for approval, all as provided by law and their respective Certificates of Incorporation, at, in the case of Molycorp, a meeting which shall be held on July 26, 1977, if the Registration Statement on Form S-14 referred to in Section 4.04 shall become effective on or prior to June 22, 1977, or as soon after July 26, 1977, as practicable if such Registration Statement shall not be effective by June 22, 1977. Union agrees to cause its shares of Subsidiary to be voted in favor of the Merger or to consent thereto as the holder of all of the outstanding shares of Subsidiary.

4.03. *Listing of Union Common Stock.* Union has obtained, or shall use all reasonable efforts to obtain, prior to the effective time of the Merger, approval for the listing on the New York, Midwest, and Pacific Stock Exchanges, upon official notice of issuance, of the shares of Union Common Stock to be exchanged for the issued and outstanding shares of Molycorp Common Stock pursuant to Article 4 of the Agreement of Merger and those issuable upon conversion or exercise of securities referred to in Section 2.02 hereof.

4.04. *Union Registration Statement, etc.* Prior to the effective time of the Merger, Union shall in due course prepare and file with the SEC a registration statement on Form S-14 under the Securities Act for the purpose of registering the shares of Union Common Stock to be exchanged for the shares of Molycorp Common Stock pursuant to Article 4 of the Agreement of Merger and those issuable upon conversion or exercise of securities referred to in Section 2.02 hereof (such registration statement and the proxy statement of Molycorp to be included therein as of the time such registration statement is declared effective being hereinafter called the "Registration Statement" and "Proxy Statement", respectively). The Registration Statement shall not, however, at any time be required to include any information referred to in Item 2 of Part I of Form S-14.

4.05. *Information for Proxy Statement and Registration Statement.* Molycorp and Union will each furnish to the other such data and information relating to it as the other may reasonably request for the purpose of including such data and information in the Proxy Statement or Registration Statement.

4.06. *Tax Ruling.* Each of the parties shall use all reasonable efforts to obtain the tax ruling referred to in Sections 5.01(e) and 5.02(e).

4.07. *Restricted Molycorp Common Stock.* Schedule K previously delivered by Molycorp to Union lists all Molycorp Affiliates and all holders of Molycorp Common Stock issued pursuant to any agreements or plans imposing restrictions on the rights of resale of such shares (to the extent that such restrictions continue to exist immediately following the effective time of the Merger), and the amounts of such shares, for the purpose of permitting Union to imprint appropriate legends on the certificates representing the shares of Union Common Stock to be issued pursuant to the Merger to Molycorp Affiliates or in exchange for such restricted shares of Molycorp Common Stock. Such Schedule K shall be updated and put in definitive form not later than three business days before the Time of Filing. For the purposes of this Agreement (including Exhibit B hereto), "Molycorp Affiliates" means each person (other than Molycorp) who, should such person resell Union Common Stock acquired by him in connection with the Merger, may be deemed to be subject to the requirements of paragraphs (c) and (d) of Rule 145 under the Securities Act.

4.08. *Letters from Molycorp Affiliates.* Molycorp will use its best efforts to obtain from each of the Molycorp Affiliates a letter substantially in the form attached as Exhibit B hereto.

4.09. *Consents.* Molycorp shall use its best efforts to obtain the consent or approval of each person listed on Schedule F and Schedule G previously delivered by Molycorp to Union whose consent or approval is required pursuant thereto.

4.10. *Redemption of Preferred Stock.* Unless the Merger Agreement has been previously terminated, or unless Molycorp and Union otherwise agree, Molycorp agrees that on or as promptly as practicable after the date of mailing of the Proxy Statement and prior to the record date for the meeting of stockholders referred to in Section 4.02, it will give notice of redemption of the \$2.50 Cumulative Convertible Preferred Stock, fixing a redemption date prior to the effective time of the Merger, and will make appropriate arrangements for the payment of shares so redeemed so that the holders of such Preferred Stock shall not be entitled to vote (other than as holders of Common Stock into which such Preferred Stock may have been converted) at the Molycorp stockholders meeting referred to in Section 4.02.

ARTICLE V

CONDITIONS OF MERGER; ABANDONMENT OF MERGER

5.01. *Conditions of Obligation of Union and Subsidiary.* The obligation of Union and Subsidiary to effect the Merger shall be subject to the following conditions:

(a) *Representations and Warranties of Molycorp to be True.* The representations and warranties of Molycorp herein contained shall be true at the Time of Filing with the same effect as though made at such time, except to the extent waived hereunder or affected by the transactions contemplated herein and by the schedules delivered hereunder; Molycorp shall have performed all obligations and complied with all covenants and conditions required by this Agreement to be performed or complied with by it at or prior to the Time of Filing; and Molycorp shall have delivered to Union a certificate of Molycorp in form and substance satisfactory to Union dated the Time of Filing and signed by its president and principal financial officer, to all such effects. With respect to any representation or warranty made by Molycorp to the best of its knowledge, this condition shall not be deemed satisfied if the facts set forth therein are incorrect whether or not such incorrectness was known to Molycorp on the date of this Agreement or brought to the attention of Molycorp by Union or otherwise subsequent to such date.

(b) *Listing of Union Common Stock.* The New York, Midwest and Pacific Stock Exchanges shall have approved for listing, upon official notice of issuance, the shares of Union Common Stock for which the Molycorp Common Stock issued and outstanding immediately prior to the effective time of the Merger shall be exchanged at the effective time of the Merger and the shares of Union Common Stock issuable upon conversion or exercise of the securities referred to in Section 2.02.

(c) *Stockholder Approval and Registration of Union Common Stock.* The stockholders of Subsidiary and Molycorp shall have approved this Agreement and the Agreement of Merger, all as referred to in Section 4.02. The Registration Statement shall be effective under the Securities Act and not the subject of any "stop order" or threatened "stop order."

(d) *No Governmental Proceedings.* No action or proceeding shall have been instituted and, at what would otherwise have been the Time of Filing, remain pending before a court or other governmental body by any governmental agency or public authority to restrain or prohibit the transactions contemplated by this Agreement, nor shall any governmental agency have notified any party to this Agreement that consummation of the Merger would constitute a violation of the laws of the United States and that it intends to commence proceedings to restrain the consummation of the Merger or to force divestiture, unless such agency shall have withdrawn such notice prior to what would otherwise have been the Time of Filing.

(e) *Tax Ruling.* Union shall have received in form and substance satisfactory to it, and there shall have been compliance with all material conditions of, a tax ruling from the Internal Revenue Service to the effect that:

(i) the Merger constitutes a reorganization within the meaning of Section 368(a)(1) of the Code;

(ii) no gain or loss will be recognized by Union, Subsidiary, or Molycorp as a result of the Merger;

(iii) no gain or loss will be recognized by the holders of Molycorp Common Stock upon the exchange of their Molycorp Common Stock solely for Union Common Stock (except with respect to cash payments attributable to fractional shares);

(iv) the basis of the Union Common Stock to be received by the holders of Molycorp Common Stock will be the same as the basis of the Molycorp Common Stock surrendered in exchange therefor; and

(v) the holding period of the Union Common Stock to be received by the holders of Molycorp Common Stock will include the holding period of the Molycorp Common Stock surrendered in exchange therefor, provided that such Molycorp Common Stock is held as a capital asset on the effective date of the Merger; or

In the discretion of Union, if such ruling shall not have been obtained at or prior to the effective time of the Merger, Union shall have received from counsel satisfactory to it an opinion to the foregoing effect, satisfactory in form and substance to Union.

(f) Letter of D. G. Sisterson & Company. Union shall have been furnished on the date on which the Registration Statement shall have become effective under the Securities Act with a letter of D. G. Sisterson & Company, dated not earlier than two days prior to such date in form and substance satisfactory to Union, to the effect that:

(i) as to the audited consolidated financial statements of Molycorp and its subsidiaries examined by it and included in the Registration Statement, it is a firm of independent public accountants with respect to Molycorp and its subsidiaries within the meaning of the Securities Act and the rules and regulations of the SEC thereunder;

(ii) in its opinion the audited consolidated financial statements of Molycorp and its subsidiaries examined by it and included in the Registration Statement comply as to form in all material respects with the applicable requirements of the Securities Act and the applicable published rules and regulations of the SEC thereunder with respect to Registration Statements on Form S-14; and

(iii) on the basis of specified procedures (which do not constitute an examination in accordance with generally accepted auditing standards), consisting of a reading of the unaudited consolidated financial statements, if any, of Molycorp and its subsidiaries included in the Registration Statement and of the latest available unaudited consolidated financial statements of Molycorp and its subsidiaries; inquiries of officers of Molycorp responsible for financial and accounting matters, a reading of the minutes of meetings of stockholders, the Board of Directors and the Executive and Audit Committees of the Board of Directors of Molycorp and its subsidiaries, nothing has come to its attention which caused it to believe (A) that the unaudited consolidated financial statements, if any, of Molycorp and its subsidiaries included in the Registration Statement were not fairly presented in conformity with generally accepted accounting principles applied on a basis substantially consistent with that of the audited consolidated financial statements of Molycorp and its subsidiaries as of December 31, 1976, or that the unaudited operating results, if any, set forth in the Registration Statement in "Management Discussion and Analysis of Summary of Consolidated Operations of Molycorp" were not determined on a basis substantially consistent with that of the corresponding amounts in the audited Consolidated Statement of Income of Molycorp and its subsidiaries, and (B) during the period from December 31, 1976, to a date five business days prior to the date of such letter there was any change in the capital stock or long-term debt of Molycorp and its subsidiaries or any decrease in consolidated net assets as compared with amounts shown in the consolidated balance sheet as of December 31, 1976, or that during the period from the date of said balance sheet to said specific date there was any decrease, as compared with the corresponding period in the prior year, in consolidated net income of Molycorp and its subsidiaries except in all instances for

changes or decreases which the Registration Statement discloses have occurred or may occur, or they shall state any specific changes or decreases therein, and (C) that the unaudited consolidated financial statements, if any, of Molycorp and its subsidiaries included in the Registration Statement do not comply as to form in all material respects with the applicable accounting requirements of the Securities Act and the rules and regulations of the SEC thereunder.

(g) Supplemental Letter of D.G. Sisterson & Company. Union shall have been furnished with a letter of D.G. Sisterson & Company, dated the Time of Filing to the effect set out in (f) above.

(h) Statutory Requirements. All statutory requirements for the valid consummation by Molycorp of the transactions contemplated by this Agreement and the Agreement of Merger shall have been fulfilled; all authorizations, consents, and approvals of all federal, state, local, and foreign governmental agencies and authorities required to be obtained in order to permit consummation by Molycorp of the transactions contemplated by this Agreement and the Agreement of Merger and to permit the business presently carried on by Molycorp and its subsidiaries and affiliates to continue unimpaired immediately following the effective time of the Merger shall have been obtained.

(i) Opinion of Counsel to Molycorp. Union shall have received from Messrs. Stroock & Stroock & Lavan an opinion, dated immediately prior to the Time of Filing, in form and substance satisfactory to Union, with respect to Molycorp and its subsidiaries, to the effect that (i) Molycorp and each of its subsidiaries is a corporation duly organized and validly existing and in good standing under the laws of the jurisdiction of its incorporation, (ii) Molycorp and each of its subsidiaries is duly qualified and licensed as a foreign corporation and in good standing in each jurisdiction set forth in Schedule A with reference to such corporation, (iii) Molycorp has the corporate power to carry on its business as now being conducted, (iv) the authorized capital stock of Molycorp consists of 5,000,000 shares of common stock, par value \$1 per share, and 500,000 shares of preferred stock of which 201,045 shares have been designated as \$2.50 Cumulative Convertible Preferred Stock and stating the number of such shares which have been issued, and that such issued shares have been duly authorized, are validly issued and outstanding, and are fully paid and nonassessable, (v) except as otherwise (but consistent with Schedule A) noted in such opinion, all of the shares of capital stock of each Molycorp subsidiary, KBI and CBMM owned by Molycorp are directly or indirectly owned by Molycorp free and clear of all liens, claims, charges or encumbrances of record, and to the best knowledge of such counsel neither Molycorp nor any of its subsidiaries is a party to or bound by any outstanding option, warrant or other right to subscribe for or purchase from Molycorp or any of its subsidiaries, or any plans, contracts or commitments (other than those referred to in such opinion) providing for the issuance of or the granting of rights to acquire, any capital stock of, or securities convertible into or exchangeable for capital stock of, Molycorp or any of its subsidiaries, (vi) this Agreement and the Agreement of Merger each has been duly executed and delivered by Molycorp and is the valid and binding obligation of Molycorp, and all corporate action by Molycorp required to authorize the Merger has been taken, and Molycorp has the corporate power to effect the Merger provided for in this Agreement and the Agreement of Merger, (vii) neither the execution and delivery by Molycorp of this Agreement or the Agreement of Merger, nor compliance with the terms and provisions of either thereof, will conflict with or result in a breach of any of the terms, conditions or provisions of any agreement, contract or commitment listed on any schedule delivered by Molycorp to Union pursuant to this Agreement or to the best knowledge of such counsel of any judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign, to which Molycorp or any of its subsidiaries is subject, or constitute a material default thereunder, or give to others any interest or rights, including rights of termination, cancellation or acceleration, in or with respect to any of the Principal Properties of Molycorp or any of its subsidiaries or with respect to any of such agreements, contracts or commitments, (viii) except as set forth in the 1976 10-K or any schedule delivered by Molycorp to Union pursuant to this Agreement on or prior to the date of this Agreement, to the best of the knowledge of such counsel, neither Molycorp nor any of its subsidiaries is engaged in or threatened with any suit, action or legal, administrative, arbitration or other proceeding or governmental investigation which might materially and adversely affect or impair the business or condition, financial or otherwise, of Molycorp and its subsidiaries considered as a whole, (ix) all

authorizations, consents and approvals of all governmental agencies and authorities of the United States and the State of Delaware, required in order to permit consummation by Molycorp of the transactions contemplated by this Agreement and, to the best knowledge of such counsel, to permit the businesses presently carried on by Molycorp and its subsidiaries to continue unimpaired to any material degree immediately following the effective time of the Merger have been obtained, (x) the persons listed in such opinion constitute all persons who may reasonably be deemed to be Molycorp Affiliates, (xi) on the basis of the information which was developed in the course of the performance of the services of such counsel in connection with the Registration Statement and Proxy Statement, with respect to information relating to Molycorp and its subsidiaries and shareholders and KBI and CBMM and its or their respective business, properties, management or securities, (A) the Proxy Statement, as of the date of mailing thereof, appeared on its face to be appropriately responsive in all material respects to the requirements of the Exchange Act and the applicable rules and regulations of the SEC thereunder, (B) such counsel do not believe that the Proxy Statement on such date of mailing, contained any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and (C) to the best of the knowledge of such counsel, subsequent to the effective date of the Registration Statement and the date of mailing of the Proxy Statement, on the one hand, and prior to the date of such opinion, on the other, no event, occurrence, or state of facts arose or came to light which should have been, and was not, appropriately disclosed to the stockholders of Molycorp under applicable federal securities laws (it being understood, however, that (1) such counsel need not assume any responsibility for any events, occurrences or states of fact relating to Molycorp, KBI, CBMM or their subsidiaries, businesses, properties, managements or securities, or for the accuracy, completeness or fairness of the statements contained in, or for any omissions from, the Registration Statement or Proxy Statement, except that such counsel shall affirmatively indicate that nothing has come to their attention that would lead such counsel to disbelieve any statements therein in respect of the Merger, this Agreement or the Agreement of Merger, and (2) such counsel need not express an opinion with respect to the financial statements or other financial, statistical, geologic, mining or operating data contained therein), and (xii) the Board of Directors and stockholders of Molycorp have taken all action required by law, the Certificate of Incorporation and By-Laws of Molycorp and, to the best knowledge of such counsel, all other action required to authorize the execution, delivery and performance of this Agreement and the Agreement of Merger by Molycorp. Such opinion shall also cover such other matters incident to the matters herein contemplated as Union and its counsel may reasonably request, including the form of all papers and the validity of all proceedings. In rendering such opinion such counsel may rely, to the extent such counsel deems such reliance necessary or appropriate, upon opinions of other counsel and, as to matters of fact, upon the representations and warranties in this Agreement, upon certificates and statements of state officials and certificates of any officer or officers of Molycorp, or other responsible persons deemed appropriate by such counsel.

(j) Opinion of Counsel to KBI. Union shall have received from Messrs. Donovan Leisure Newton & Irvine an opinion dated immediately prior to the Time of Filing, in form and substance satisfactory to Union to the effect that (i) KBI is a corporation duly organized and validly existing and in good standing under the laws of the Commonwealth of Pennsylvania, (ii) KBI is duly qualified and licensed as a foreign corporation and is in good standing in each jurisdiction set forth in Schedule A with reference to such corporation, (iii) KBI has the corporate power to carry on its business as now being conducted, (iv) except as otherwise (but consistent with Schedule A) noted in such opinion, all of the shares of capital stock of KBI owned by Molycorp have been duly authorized, are validly issued and outstanding, and are fully paid and nonassessable, and to the best of the knowledge of such counsel, KBI is not a party to or bound by any outstanding option, warrant or other right to subscribe for or purchase from KBI, or any plans contracts or commitments (other than those referred to in such opinion) providing for the issuance of or the granting of rights to acquire, any capital stock of, or securities convertible into or exchangeable for capital stock of KBI, (v) neither the execution and delivery by Molycorp of this Agreement or the Agreement of Merger, nor compliance with the terms and provisions of either thereof, will conflict with or result in a breach of any of the terms, conditions or provisions of any agreement, contract or commitment to which KBI or a subsidiary is a party or by

which it is bound and listed on any schedule delivered by Molycorp to Union pursuant to this Agreement or, to the best knowledge of such counsel, of any judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign, to which KBI is subject, or constitute a material default thereunder, or give to others any interest or rights, including rights of termination, cancellation or acceleration, in or with respect to any of the Principal Properties of KBI or with respect to any of such agreements, contracts or commitments, and (vi) except as set forth in the KBI 10-K or in any schedule delivered by Molycorp to Union pursuant to this Agreement on or prior to the date of this Agreement, to the best of the knowledge of such counsel, KBI is not engaged in or threatened with any suit, action or legal, administrative, arbitration or other proceeding or governmental investigation which might materially and adversely affect or impair the business or condition, financial or otherwise, of KBI and its subsidiaries considered as a whole. Such opinion shall also cover such other matters incident to the matters herein contemplated as Union and its counsel may reasonably request. In rendering such opinion such counsel may rely, to the extent such counsel deems such reliance necessary or appropriate, upon opinions of local counsel as to matters of law other than that of the United States or New York and, as to matters of fact, upon certificates and statements of state officials and certificates of any officer or officers of KBI, or other responsible persons deemed appropriate by such counsel.

(k) Opinion of Brazilian Counsel to CBMM. Union shall have received from Demerest e Almeida an opinion, dated immediately prior to the Time of Filing, as to such matters concerning CBMM's due organization, powers, agreements, capital structure, title to properties, governmental authorizations and the legality of its operations as Union shall request in form and substance satisfactory to Union. In rendering such opinion such counsel may rely, to the extent such counsel deems such reliance necessary or appropriate, as to matters of fact, upon certificates of officials of Brazil or any state thereof and of any officer or officers of Molycorp or CBMM.

(l) Letter from Coopers & Lybrand. Union shall have received from Messrs. Coopers & Lybrand, its accountants, an opinion, satisfactory in form and substance to it, to the effect that the Merger may be treated by the Constituent Corporations and Union as a "pooling of interests" for financial reporting purposes.

(m) Assurances as to Real Estate. As to the Mines of Molycorp, Union shall have received opinions from real estate counsel satisfactory to it (which counsel shall be satisfactory to Molycorp), in each case satisfactory in form and substance to it, confirming that, based upon reviews of title documents, leases, maps, geological studies, and other relevant materials, there is no material defect in title to any such property of such nature as would render the representation and warranty set forth in the second sentence of Section 2.07(a) to the extent applicable to such property, inaccurate in any significant respects.

(n) Receipt by Union of Letters from Molycorp Affiliates. Union shall have received from each Molycorp Affiliate a duly executed letter substantially in the form of Exhibit B attached hereto.

(o) Required Consents. Molycorp shall have obtained the consent or approval of each person listed on Schedule F or Schedule G whose consent or approval is required pursuant thereto.

5.02. *Conditions of Obligation of Molycorp.* The obligation of Molycorp to effect the Merger shall be subject to the following conditions:

(a) Representations and Warranties of Union to be True. The representations and warranties of Union herein contained shall be true at the Time of Filing with the same effect as though made at such time, except to the extent waived hereunder or affected by the transactions contemplated herein; Union shall have performed all obligations and complied with all covenants and conditions required by this Agreement to be performed or complied with by it prior to the Time of Filing; and Union shall have delivered to Molycorp a certificate of Union in form and substance satisfactory to Molycorp, dated the Time of Filing and signed by a Vice President and principal financial officer, to all such effects.

(b) Listing of Union Common Stock. The New York, Midwest, and Pacific Stock Exchanges shall have approved for listing, upon official notice of issuance, the shares of Union Common Stock for which the Molycorp Common Stock issued and outstanding immediately prior to the effective time of the Merger shall be exchanged at the effective time of the Merger and into or for which securities referred to in Section 2.02 may be converted or exercised.

(c) Stockholder Approval and Registration of Union Stock. The stockholders of Subsidiary and Molycorp shall have approved this Agreement and the Agreement of Merger, as referred to in Section 4.02. The Registration Statement shall be effective under the Securities Act and shall not be the subject of any "stop order" or threatened "stop order."

(d) No Governmental Proceedings. No action or proceeding shall have been instituted and, at what would otherwise have been the Time of Filing, remain pending before a court or other governmental body by any governmental agency or public authority to restrain or prohibit the transactions contemplated by this Agreement nor shall any governmental agency have notified any party to this Agreement that consummation of the Merger would constitute a violation of the laws of the United States and that it intends to commence proceedings to restrain the consummation of the Merger or to force divestiture, unless such agency shall have withdrawn such notice prior to what would otherwise have been the Time of Filing.

(e) Tax Ruling. Molycorp shall have received in form and substance satisfactory to it, and there shall have been compliance with all material conditions of, a tax ruling from the Internal Revenue Service to the effect set forth in Section 5.01(e)(i) through (v); or in the discretion of Molycorp in the event such ruling shall not have been obtained at or prior to the effective time of the Merger, Molycorp shall have received from Messrs. Stroock & Stroock & Lavan an opinion to the foregoing effect, satisfactory in form and substance to Molycorp.

(f) Letter of Coopers & Lybrand. Molycorp shall have been furnished on the date on which the Registration Statement shall have become effective under the Securities Act, with a letter of Coopers & Lybrand, dated not earlier than two days prior to such date, in form and substance satisfactory to Molycorp, to the effect that:

(i) it is a firm of independent public accountants with respect to Union and its subsidiaries, within the meaning of the Securities Act and the rules and regulations of the SEC thereunder;

(ii) in its opinion the audited consolidated financial statements of Union and its subsidiaries examined by it and included in the Registration Statement comply as to form in all material respects with the applicable requirements of the Securities Act and the applicable published rules and regulations of the SEC thereunder with respect to Registration Statements on Form S-14; and

(iii) on the basis of specified procedures (which do not constitute an examination in accordance with generally accepted auditing standards), consisting of a reading of the unaudited consolidated financial statements, if any, of Union and its subsidiaries included in the Registration Statement and of the latest available unaudited consolidated financial statements of Union and its subsidiaries, inquiries of officers of Union responsible for financial and accounting matters, a reading of the minutes of meetings of stockholders, the Board of Directors and the Accounting and Auditing Committee of the Board of Directors of Union, nothing has come to its attention which caused it to believe (A) that the unaudited consolidated financial statements, if any, of Union and its subsidiaries included in the Registration Statement were not fairly presented in conformity with generally accepted accounting principles applied on a basis substantially consistent with that of the audited consolidated financial statements of Union and its subsidiaries as of December 31, 1976, or that the unaudited total revenues and net earnings amounts, if any, set forth in the Registration Statement in Union Management's Discussion and Analysis of Statement of Earnings were not determined on a basis substantially consistent with that of the corresponding amounts in the audited statement of consolidated earnings of Union and its subsidiaries, and (B) during the period from December 31, 1976, to a date five business days prior to the date of such letter there was any change in the capital stock or long-term debt of

Union and its subsidiaries or any decrease in consolidated net assets as compared with amounts shown in such consolidated balance sheet, or that during the period from the date of said balance sheet to said specific date there was any decrease as compared with the corresponding period in the prior year, in consolidated net income of Union and its subsidiaries except in all instances for changes or decreases which the Registration Statement discloses have occurred or may occur, or they shall state any specific changes or decreases therein, and (C) that the unaudited consolidated financial statements, if any, of Union and its subsidiaries included in the Registration Statement do not comply as to form in all material respects with the applicable accounting requirements of the Securities Act and the rules and regulations of the SEC thereunder.

(g) Supplemental Letter of Coopers & Lybrand. Molycorp shall have been furnished with a letter of Coopers & Lybrand dated the Time of Filing to the effect set forth in (f) above.

(h) Statutory Requirements. All statutory requirements for the valid consummation by Union and Subsidiary of the transactions contemplated by this Agreement and the Agreement of Merger shall have been fulfilled; and all authorizations, consents and approvals of all federal, state, local and foreign governmental agencies and authorities required to be obtained in order to permit consummation by Union and Subsidiary of the transaction contemplated by this Agreement shall have been obtained.

(i) Opinion of Corporate Counsel of Union and Subsidiary. Molycorp shall have received from George C. Bond, Esq., General Counsel of Union and counsel to Subsidiary, an opinion, dated immediately prior to the Time of Filing, in form and substance satisfactory to Molycorp, to the effect that (i) Union and its Principal Entities and Subsidiary is each a corporation duly organized and validly existing and in good standing under the laws of the jurisdiction of its incorporation, (ii) Union and its Principal Entities and Subsidiary each has the corporate power to carry on its business as now being conducted, (iii) the authorized capital stock of Subsidiary is as set forth in Section 3.03 hereof, and stating the number of shares of such stock which have been issued and that such shares have been duly and validly authorized and issued and are fully paid and nonassessable and are owned of record by Union, (iv) the authorized capital stock of Union consists of 10,275,397 shares of \$2.50 Cumulative Convertible Preferred Stock, and 65,000,000 shares of Union Common Stock, par value \$8½ per share, and stating the number of shares of authorized capital stock of Union which have been issued, that such issued shares have been duly authorized, are validly issued and (except for treasury shares) outstanding, and are fully paid and nonassessable, and stating the number of shares which were at that date held in the treasury of Union, (v) the shares of Union Common Stock to be issued pursuant to Article 4 of the Agreement of Merger at the time of filing and thereafter have been duly authorized and, upon issuance, will be duly and validly issued and will be fully paid and nonassessable, (vi) this Agreement has been duly executed and delivered by Union, this Agreement and the Agreement of Merger each has been duly executed and delivered by Subsidiary, this Agreement is the valid and binding obligation of Union and Subsidiary, the Agreement of Merger is the valid and binding obligation of Subsidiary and all corporate action by Union and Subsidiary required to authorize the Merger has been taken, and Union and Subsidiary each has the corporate power to effect the Merger provided for in this Agreement and the Agreement of Merger, (vii) Union is duly qualified as a foreign corporation and in good standing in each state of the United States, (viii) neither the execution and delivery by Union and Subsidiary of this Agreement or by Subsidiary of the Agreement of Merger, nor compliance with the terms and provisions of either thereof will to the best of the knowledge of such counsel conflict with or result in a breach of any of the terms, conditions or provisions of any judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign, to which Union is subject, or any material agreement, contract or commitment to which Union is a party or by which it is bound, or constitute a material default thereunder, (ix) the respective Boards of Directors of Subsidiary and Union, and Union have taken all action required by law, the respective certificates of incorporation and by-laws of Union and Subsidiary and, to the best knowledge of such counsel, all other action required to authorize the execution, delivery and performance of this Agreement by Union and this Agreement and the Agreement of Merger by Subsidiary has been taken, (x) all authorizations, consents and approvals of

all governmental agencies and authorities of the United States and California required in order to permit consummation by Union and Subsidiary of the transactions contemplated by this Agreement have been obtained (it being understood, however, that such counsel need not express an opinion with respect to State securities or Blue Sky laws), and (xi) on the basis of the information which was developed in the course of the performance of the services of such counsel in connection with the Registration Statement and Proxy Statement, with respect to information relating to Union and its subsidiaries and its or their business, properties, management or securities, (A) the Registration Statement and the Proxy Statement, as of the effective date of the Registration Statement, appeared on their face to be appropriately responsive in all material respects to the requirements of the Securities Act, and the applicable rules and regulations of the SEC thereunder, (B) such counsel does not believe that the Registration Statement on such effective date, or Proxy Statement on the date of mailing, contained any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein not misleading, and (C) to the best of the knowledge of such counsel, subsequent to the effective date of the Registration Statement and the date of mailing of the Proxy Statement, on the one hand, and prior to the date of such opinion, on the other, no event, occurrence, or state of facts arose or came to light which should have been, and was not appropriately, disclosed to the stockholders of MolyCorp under applicable federal securities laws (it being understood, however, that (1) such counsel need not assume any responsibility for any events, occurrences or states of fact relating to Union or MolyCorp or their respective subsidiaries, businesses, properties, managements or securities, or for the accuracy, completeness or fairness of the statements contained in, or for any omissions from, the Registration Statement, or Proxy Statement except that such counsel shall affirmatively indicate that he is not aware of anything that would lead him to disbelieve any statements therein in respect to the Merger, this Agreement or the Agreement of Merger, and (2) such counsel need not express an opinion with respect to the financial statements or other financial or statistical data contained therein). Such opinion shall also cover such other matters incident to the matters herein contemplated as MolyCorp may reasonably request, including the form of all papers and the validity of all proceedings. In rendering such opinion, such counsel may rely, to the extent such counsel deems such reliance necessary or appropriate, upon opinions of counsel for certain of its Principal Entities, and of local counsel as to matters of law other than that of the United States or California and, as to matters of fact, upon certificates of state officials and of any officer or officers of Union.

(j) Pooling Condition. The condition in paragraph (1) of Section 5.01 of this Article V shall be satisfied.

(k) Blue Sky Memorandum. MolyCorp shall have received a memorandum prepared by Gibson, Dunn & Crutcher setting forth those states in which applications have been filed for registration of shares of the Union Common Stock to be issued pursuant to Article 4 of the Agreement of Merger and the action taken in respect of such application and, as to those states in which MolyCorp had stockholders of record on the record date for the meeting of stockholders referred to in Section 4.02 (as shown on the stockholder records of MolyCorp at such date) and in which no such application was filed, the exemption relied upon in not making such application.

5.03. *Termination of Agreement and Abandonment of Merger.* Anything herein to the contrary notwithstanding, this Agreement, the Agreement of Merger and the Merger contemplated hereby may be terminated at any time before the Time of Filing, whether before or after approval of this Agreement by the respective stockholders of Subsidiary and MolyCorp, as follows:

- (a) Mutual Consent. By mutual consent of the Boards of Directors of Union and MolyCorp.
- (b) Conditions to Union's Performance Not Met. By the Board of Directors of Union if, by August 30, 1977, the conditions set forth in Section 5.01 shall not have been met.
- (c) Conditions to MolyCorp's Performance Not Met. By the Board of Directors of MolyCorp if, by August 30, 1977, the conditions set forth in Section 5.02 shall not have been met.
- (d) Expiration Date. By the Board of Directors of either of Union or MolyCorp if the Merger shall not have become effective by August 30, 1977, which date may be extended by mutual agreement of the Boards of Directors of Union and MolyCorp.

5.04. *Termination of Agreement and Abandonment of Merger Prior to Shareholder Approval.* In addition to the conditions set forth in Section 5.03, this Agreement, the Agreement of Merger and the Merger contemplated hereby may be terminated at any time prior to the approval of the Merger by the stockholders of Molycorp as required by the Delaware General Corporation Law, by action of the Board of Directors of either Molycorp or Union at the sole discretion of either of them.

ARTICLE VI

TERMINATION OF OBLIGATIONS AND WAIVER OF CONDITIONS; PAYMENT OF EXPENSES

In the event this Agreement and the Agreement of Merger are terminated and abandoned as in Article V provided, this Agreement shall forthwith become wholly void and of no force and effect, there shall be no liability on the part of any of the parties hereto or their respective Directors, officers, stockholders or controlling persons as a result of this Agreement or the Agreement of Merger or the breach of either thereof, each party hereto will pay all costs and expenses incident to its negotiation and preparation of this Agreement and the Agreement of Merger and to its performance of and compliance with all agreements and conditions contained herein or therein on its part to be performed or complied with, including the fees, expenses and disbursements of its counsel, provided that the obligations of Union and Molycorp contained in the second sentence of Section 4.01(a) and the second paragraph of this Article VI shall survive any such termination. If any of the conditions specified in Section 5.01 has not been satisfied, Union and Subsidiary may nevertheless at the election of Union proceed with the transaction contemplated hereby and, if any of the conditions specified in Section 5.02 has not been satisfied, Molycorp may nevertheless at its election proceed with the transactions contemplated hereby. Any such election to proceed shall be evidenced by a certificate executed on behalf of the electing party by its Chairman, its President or one of its Vice Presidents. Whether or not the Merger shall be consummated, each party hereto will pay all of its costs and expenses in connection therewith, including the costs and expenses referred to in the first sentence of this Article VI.

In the event that Union shall terminate this Agreement and the Agreement of Merger after Molycorp has given notice of redemption of its \$2.50 Cumulative Convertible Preferred Stock, as in Section 4.10 provided, Union shall pay to Molycorp the amount of \$250,000 as indemnification for its costs, expenses and losses in redeeming such Preferred Stock in anticipation of the Merger hereunder. If the Merger is not consummated for any reason whatsoever after Molycorp has given the foregoing notice of redemption, Union shall loan or arrange to be loaned by a third party to Molycorp an amount equal to the excess, if any, over \$5,000,000 of the aggregate amount paid in redemption of the Preferred Stock. Such loan shall bear interest at a rate no higher than borrowings under Molycorp's existing lines of credit with Bankers Trust Company and Mellon Bank, N.A., shall be repayable in full three years from its date, shall be prepayable at any time without penalty, and shall be evidenced by a promissory note without covenants other than a covenant of payment.

ARTICLE VII

OBLIGATIONS TO BE PERFORMED AFTER THE MERGER

7.01. *Molycorp Employee Stock Options.* Union will assume all outstanding options to purchase Molycorp Common Stock outstanding pursuant to the Molycorp 1973 Employees Qualified Stock Option Plan; and upon the exercise of such options in accordance with the terms thereof Union will issue such shares of its Common Stock as in Article 4 of the Agreement of Merger provided. Union will take such steps as are necessary so that from and after the effective time of the Merger the shares of Union Common Stock issuable upon the exercise of stock options under the Molycorp 1973 Employees Qualified Stock Option Plan shall at all times be subject to an effective registration statement under the Securities Act adequate to permit exercise of such options.

7.02. *Maintenance of Certain Employee Benefit Levels.* Union agrees for the express benefit of the participants in the Molycorp salaried employee benefit plans referred to below:

(a) Prior to December 31, 1978, the Molycorp benefit plans for salaried employees set forth in Schedule F shall not be amended to reduce the level of benefits in effect on the date of this Agreement or to adversely affect the level of benefits contemplated by proposed amendments to such plans as such amendments are set forth in Schedule F.

(b) The Molycorp Annuity Plan for Salaried Employees (the "Annuity Plan") shall not be amended or merged with any other plan prior to December 31, 1979, unless necessary to comply with law or retain its qualified status under the Code, and except amendments which do not adversely affect the benefits or rights available thereunder.

(c) Any Molycorp employee who, on December 31, 1979, has ten or more years credited service for vesting purposes under the Annuity Plan shall continue to accrue benefits and rights in accordance with the terms of the Annuity Plan (i) until December 31, 1979, if such employee has then reached at least fifteen years of such credited service; or (ii) until such employee reaches fifteen years of such credited service, if such employee has not reached such level as of December 31, 1979; or (iii) until such employee retires or his service otherwise terminates, if earlier (whichever of (i), (ii) or (iii) first occurs being herein called the "Accrual Date"). Any such employee, his spouse or other beneficiary, shall, at the time specified in the Annuity Plan for payment of benefits or exercise of rights, be entitled to benefits and rights no less than those accrued under the terms of the Annuity Plan for such period of service to the Accrual Date, provided, however, that the average of the three consecutive years of highest compensation shall be deemed to be three consecutive years out of the most recent ten years preceding the Accrual Date and that in determining the percentage of benefits, rights and any reduction of benefits upon exercise of any rights, to which the employee is entitled, his actual years of service shall be used.

7.03. *Compensation of Certain Persons.* The annual salary and directors' fees paid to the present officers of Molycorp in their capacities as such and, to the extent applicable, as officers or directors of KBI during 1977 and 1978 will not be less than the present rate of compensation established for them, subject in the case of Dan M. Kentro to his retirement at the end of 1977. In addition, the executive bonus plan of Molycorp will be continued during 1977 and 1978 with the bonuses payable thereunder being computed by using the same standards, policies and procedures, including accounting standards, policies and procedures, followed by Molycorp in prior years.

ARTICLE VIII

MISCELLANEOUS

8.01. *Amendments.* Subject to applicable law, this Agreement and any exhibit attached hereto may be amended upon authorization by the Boards of Directors of the parties hereto before or after the meetings of stockholders referred to in Section 4.02 hereof at any time prior to the Time of Filing except that no such amendment shall affect the rate of exchange provided for in Article 4 of the Agreement of Merger.

8.02. *"Subsidiaries."* A "subsidiary" with respect to Molycorp, Union, KBI or CBMM shall mean a corporation (or equivalent legal entity under foreign law) of which Molycorp, Union, KBI or CBMM, as the case may be, owns directly or indirectly more than 50% of the stock the holders of which are ordinarily and generally, in the absence of contingencies or understandings, entitled to vote for the election of a majority of the directors except that, with respect to consolidated financial statements referred to in this Agreement, a subsidiary shall include only those corporations the accounts of which are consolidated with Molycorp, KBI, CBMM or Union, as the case may be.

8.03. *Schedules.* Each schedule delivered pursuant to the terms of this Agreement is in writing and has been initialed by the Chairman, the President or a Vice President of the delivering party.

8.04. *No Survival of Representations and Warranties.* The respective representations and warranties of Molycorp and Union contained herein, officers' certificates confirming such representations and

warranties, compliance with covenants and any responsibility of officers initialing schedules hereto shall expire and be terminated and extinguished at the effective time of the Merger or the termination and abandonment thereof, as the case may be, and none of the parties shall thereafter be under any liability whatsoever with respect to such representations and warranties, nor any officer with respect to any such certificate or any initialled schedule.

8.05. *Governing Law.* This Agreement and the legal relations between the parties shall be governed by and construed in accordance with the laws of the State of California.

8.06. *Notices.* Any notices or other communications required or permitted hereunder shall be sufficiently given if personally delivered or sent by facsimile transmission or by registered or certified mail, postage prepaid, addressed, if to Union or Subsidiary, to Union Oil Company of California, P. O. Box 7600, Los Angeles, California 90051, Attention of Thomas B. Sleeman; and if to Molycorp, to Molycorp, Inc., 6 Corporate Park Drive, White Plains, New York 10604, Attention of William R. Kuntz, with a copy to Stroock & Stroock & Lavan, 61 Broadway, New York, New York 10006, Attention of Milton N. Scofield, or such other address as shall be furnished in writing by either party; and any notice or communication shall not be deemed to have been given until received by the addressee.

8.07. *No Assignment.* Neither this Agreement nor the Agreement of Merger may be assigned by operation of law or otherwise.

8.08. *Headings.* The descriptive headings of the several Articles, Sections, and paragraphs of this Agreement are inserted for convenience only and do not constitute a part of this Agreement.

8.09. *Counterparts.* This Agreement may be executed in one or more counterparts, all of which shall be considered one and the same agreement and shall become effective when one or more counterparts have been signed by each of the parties hereto and delivered to each of the other parties hereto.

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be executed on its behalf and its corporate seal to be hereunto affixed by its officers thereunto duly authorized, all as of the day and year first above written.

UNION OIL COMPANY OF CALIFORNIA

(CORPORATE SEAL)

By /s/ Fred L. Hartley

President and Chief Executive Officer

Attest:

/s/ R. P. VanZandt

Assistant Secretary

UNION OIL SUBSIDIARY, INC.

(CORPORATE SEAL)

By /s/ Thomas B. Sleeman

Vice President

Attest:

/s/ R. O. Hedley

Secretary

MOLYCORP, INC.

(CORPORATE SEAL)

By /s/ Wm. R. Kuntz

President and Chief Executive Officer

Attest:

/s/ John R. Cook

Secretary

U 001266

EXHIBIT A

AGREEMENT OF MERGER

THIS AGREEMENT OF MERGER, dated as of the 18th day of May, 1977, between MOLYCORP, INC., a Delaware corporation (hereinafter sometimes called "MOLYCORP" and sometimes called the "surviving corporation"), party of the first part, and UNION OIL SUBSIDIARY, INC., a Delaware corporation (hereinafter sometimes called "SUBSIDIARY"), party of the second part (said corporations being hereinafter sometimes together called the "constituent corporations").

WITNESSETH:

WHEREAS, MOLYCORP is a corporation organized and existing under the laws of the State of Delaware, having been incorporated on June 1, 1920, under the provisions of the General Corporation Law of the State of Delaware; and

WHEREAS, SUBSIDIARY is a corporation organized and existing under the laws of the State of Delaware, having been incorporated on May 6, 1977, under the provisions of the General Corporation Law of the State of Delaware; and

WHEREAS, MOLYCORP has an authorized capital stock of (i) 5,000,000 shares of Common Stock, \$1 par value per share, of which at April 30, 1977, 3,703,142 shares were outstanding, and 68,778 shares were reserved for issuance upon exercise of Qualified Stock Options, 229,250 shares were reserved for issuance upon conversion of \$2.50 Cumulative Convertible Preferred Stock and 125,000 shares were reserved for conversion of the 6½% Convertible Subordinated Note and (ii) 500,000 shares of Preferred Stock of which 201,045 shares have been designated as \$2.50 Cumulative Convertible Preferred Stock, of which at April 30, 1977, 197,629 shares were outstanding; and

WHEREAS, prior to the effective date of the merger described herein all of the \$2.50 Cumulative Convertible Preferred Stock of MOLYCORP not converted into Common Stock will have been redeemed; and

WHEREAS, SUBSIDIARY has an authorized capital stock of 1,000 shares of Common Stock; and

WHEREAS, UNION OIL COMPANY OF CALIFORNIA, a California corporation ("UNION") owns all of the outstanding shares of common stock of SUBSIDIARY; and

WHEREAS, the directors, or a majority of them, of each of the constituent corporations, respectively, deem it advisable for the welfare and best interests of said corporations and for the best interests of the respective shareholders of said corporations that SUBSIDIARY be merged with and into MOLYCORP on the terms and conditions hereinafter set forth in accordance with the provisions of the General Corporation Law of the State of Delaware, which permit such merger;

NOW, THEREFORE, the parties hereto, subject to the approval of the respective shareholders of each of the constituent corporations as required by law, in consideration of the premises and of the mutual covenants and agreements contained herein and of the benefits to accrue to the parties hereto, have agreed and do hereby agree that SUBSIDIARY and MOLYCORP, the constituent corporations, be merged into a single corporation which shall be MOLYCORP, one of the constituent corporations, pursuant to the laws of the State of Delaware, and do hereby agree, prescribe and set forth the terms and conditions of the merger, the mode of carrying the same into effect and the manner and basis of converting the shares of each of the constituent corporations into shares of the surviving corporation and shares of UNION as follows:

ARTICLE I

MERGER AND NAME OF SURVIVING CORPORATION

SUBSIDIARY shall be merged into MOLYCORP in accordance with the applicable provisions of the General Corporation Law of the State of Delaware and, upon the merger becoming effective, the separate

existence of SUBSIDIARY shall cease, except to the extent provided by law in the case of a corporation after its merger into another corporation; and MOLYCORP shall continue under the laws of the State of Delaware under the name "Molycorp, Inc." as the surviving corporation.

ARTICLE 2

ARTICLES OF INCORPORATION AND BY-LAWS OF SURVIVING CORPORATION

The Articles of Incorporation and the By-Laws of MOLYCORP, as presently constituted, shall be and continue to be the Articles of Incorporation and By-Laws of the surviving corporation until the same shall be amended and changed as provided by law.

ARTICLE 3

BOARD OF DIRECTORS OF SURVIVING CORPORATION

As of the effective date of the merger the names of the members of the Board of Directors of the surviving corporation shall be as follows:

Philip Blamey	H. C. Huffman
Claude S. Brinegar	Dan M. Kentro
Edward H. Eakland, Jr.	William R. Kuntz
Lewis B. Harder	Robert W. Kuntz
Fred L. Hartley	

If on the effective date of the merger a vacancy shall exist on the Board of Directors of the surviving corporation by reason of the failure or inability of any of the above-named persons to serve as a director, such vacancy may be filled in the manner provided by law and the By-Laws of the surviving corporation.

ARTICLE 4

MANNER OF CONVERTING SHARES OF STOCK OF CONSTITUENT CORPORATIONS INTO SHARES OF STOCK OF SURVIVING CORPORATION AND SHARES OF STOCK OF UNION OIL COMPANY OF CALIFORNIA

The manner and basis of converting the shares of each of the constituent corporations into shares of the surviving corporation and shares of UNION shall be as follows:

1. Each of the outstanding shares of Common Stock of SUBSIDIARY at the time of merger shall be converted into one share of Common Stock of the surviving corporation.

2. The outstanding shares of Common Stock of MOLYCORP at the time of merger, other than those into which the outstanding shares of SUBSIDIARY are converted pursuant to Section 1 of this Article 4, shall be converted into shares of Common Stock of UNION on the following basis and thereupon such shares of MOLYCORP shall cease to exist and shall be cancelled:

(a) Each of the outstanding shares of Common Stock of MOLYCORP, other than those into which the outstanding shares of SUBSIDIARY are converted pursuant to Section 1 of this Article 4, shall be converted into 1.035 shares of Common Stock of UNION.

(b) As promptly as practicable after the effective date of the merger, each holder of an outstanding certificate or certificates theretofore representing shares of Common Stock of MOLYCORP may surrender the same to Security Pacific National Bank, as Exchange Agent, and such holder shall be entitled upon such surrender to receive in exchange therefor a certificate or certificates representing the number of shares of Common Stock of UNION into which the shares of Common Stock of MOLYCORP theretofore represented by the certificate or certificates so

surrendered shall have been converted as aforesaid. Until so surrendered, each outstanding certificate which, prior to the effective date of the merger, represented Common Stock of MOLYCORP, shall be deemed for all corporate purposes to evidence ownership of the number of shares of UNION into which the shares of Common Stock of MOLYCORP (which, prior to such effective date, were represented thereby) shall have been so converted. No dividends or distributions will be paid to persons entitled to receive certificates for shares of Union Common Stock pursuant to paragraph (2)(a) of this Article 4 until such persons shall have surrendered their certificates which prior to the effective time of the merger represented MOLYCORP Common Stock; provided, however, that when certificates which prior to the effective time of the Merger represented MOLYCORP Common Stock shall have been so surrendered, there shall be paid to the holders thereof, but without interest thereon, all dividends and other distributions payable subsequent to, and in respect of a record date after, the effective time of the Merger on the UNION Common shares for which such certificates shall have been so exchanged.

(c) Upon the effective date of the merger, it shall be deemed that the stock transfer books of MOLYCORP are closed and no transfer of shares of MOLYCORP (other than those into which stock of SUBSIDIARY are converted) shall thereafter be made or consummated.

(d) Certificates for fractions of shares of Common Stock of UNION shall not be issued. In lieu of a fraction of a share, each holder of shares of MOLYCORP Common Stock otherwise entitled to a fraction of a share of UNION Common Stock shall receive from UNION an amount of cash equal to the per share market value of UNION Common Stock (based on the average of the closing prices of UNION Common Stock on the New York Stock Exchange on each of the ten trading days immediately preceding the effective date of the merger) multiplied by the fraction of a share of UNION Common Stock to which such shareholder would be otherwise entitled. No such holder shall be entitled to dividends or other rights in respect of any such fraction.

(e) If any certificate for shares of UNION Common Stock is to be issued in a name other than that in which the certificate surrendered in exchange therefor is registered, it shall be a condition of the issuance thereof that the certificate so surrendered shall be properly endorsed and otherwise in proper form for transfer and that the person requesting such exchange pay to the Exchange Agent any transfer or other taxes required by reason of the issuance of a certificate for shares of UNION Common Stock in any name other than that of the registered holder of the certificate surrendered or establish to the satisfaction of the Exchange Agent that such tax has been paid or is not payable.

3. The terms and provisions of the MOLYCORP 1973 Employees Qualified Stock Option Plan shall, except as set forth below, continue in full force and effect and govern all stock options granted thereunder. Subsequent to the effective date of the merger, all references in the MOLYCORP 1973 Employees Qualified Stock Option Plan to MOLYCORP shall be deemed to be references to UNION and all actions to be taken thereunder by the Board of Directors of MOLYCORP or a committee thereof, including adjustment in the option prices and number of shares upon changes in the capital stock to which the option relates, shall be taken by the Board of Directors of UNION or a committee thereof, as the case may be. Each option granted under the MOLYCORP 1973 Employees Qualified Stock Option Plan which shall be outstanding at the effective date of the merger shall be assumed by Union and shall become an option to purchase the number of whole shares of UNION Common Stock equal to the number of shares of MOLYCORP Common Stock subject to such option multiplied by 1.035. The option price per share shall be the price stated in the applicable option agreement multiplied by 0.9662.

4. The terms and provisions of the 6½% Convertible Subordinated Note issued by MOLYCORP shall continue in full force and effect. Subsequent to the effective date of the merger, said Note shall be convertible into 129,375 shares of UNION Common Stock, subject to adjustment as provided in such Note.

The exchange ratio of shares of UNION Common Stock for each share of MOLYCORP Common Stock outstanding immediately prior to the effective time of the merger or into or for which other outstanding

securities of MOLYCORP are convertible or exercisable as set forth in this Article 4, shall be subject to adjustment as follows: in the event that, subsequent to the date of this Agreement but prior to the effective date of the Merger, the outstanding shares of UNION Common Stock shall have been changed into or exchanged for a different number or kind of shares or securities through reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split, or other like changes in UNION capitalization, then an appropriate and proportionate adjustment shall be made in the number and kind of shares or securities to be thereafter delivered pursuant to the Merger, it being understood that in no event shall other than UNION Common Stock as then constituted be issued pursuant to the Merger.

ARTICLE 5

SUBMISSION TO SHAREHOLDERS AND EFFECTIVENESS

This Agreement of Merger shall be submitted for consideration and vote by the shareholders of each of the constituent corporations as required by the laws of the State of Delaware, and, if adopted by the requisite votes of the shareholders of each of the constituent corporations, then this Agreement of Merger executed by the President or a Vice President and the Secretary or an Assistant Secretary of each of the constituent corporations and certified by one of such officers of each of the constituent corporations shall be delivered to the Secretary of State, State of Delaware, for filing, all in accordance with the applicable provisions of the General Corporation Law of the State of Delaware, and the officers of each of the constituent corporations shall execute all such other documents and shall take all such other action as may be necessary to make this Agreement of Merger effective. The effective date of the merger provided for by this Agreement of Merger shall be the date on which the aforesaid filing in the office of the Secretary of State, State of Delaware, is completed.

ARTICLE 6

TRANSFER OF ASSETS AND LIABILITIES

When the merger has been effected:

1. The separate existence of SUBSIDIARY shall cease, and the corporate existence and identity of MOLYCORP shall continue as the surviving corporation.
2. The surviving corporation shall have the rights, privileges, immunities, and powers and shall be subject to all the duties and liabilities of a corporation organized under the General Corporation Law of the State of Delaware.
3. The surviving corporation shall thereupon and thereafter possess all the rights, privileges, immunities, and franchises, as well of a public as of a private nature, of each of the constituent corporations; and all property, real, personal, and mixed, and all debts due on whatever account, including subscriptions to shares, and all other choses in action, and all and every other interest, of or belonging to or due to each of the constituent corporations, shall be taken and deemed to be transferred to and vested in the surviving corporation without further act or deed.
4. The surviving corporation shall thenceforth be responsible and liable for all liabilities and obligations of each of the constituent corporations; and any claim existing or action or proceeding pending by or against either of the constituent corporations may be prosecuted as if such merger had not taken place or the surviving corporation may be substituted in its place. Neither the rights of creditors nor liens upon the property of either of the constituent corporations shall be impaired by the merger.

ARTICLE 7

TERMINATION OF AGREEMENT AND ABANDONMENT OF MERGER

This Agreement of Merger and the Merger contemplated hereby may be terminated and abandoned at any time before this Agreement of Merger has been filed with the Secretary of State of Delaware, whether before or after approval of this Agreement of Merger by the respective stockholders of SUBSIDIARY and MOLYCORP, as follows:

(a) By mutual consent of the Boards of Directors of SUBSIDIARY and MOLYCORP.

(b) By the Board of Directors of UNION if, by August 30, 1977, the conditions set forth in Section 5.01 of Article V of the Agreement and Plan of Reorganization dated as of May 18, 1977 by and among UNION, SUBSIDIARY and MOLYCORP (the "Agreement and Plan") shall not have been met.

(c) By the Board of Directors of MOLYCORP if, by August 30, 1977, the conditions set forth in Section 5.02 of Article V of the Agreement and Plan shall not have been met.

(d) By the Board of Directors of either of SUBSIDIARY or MOLYCORP if the Merger shall not have become effective by August 30, 1977, which date may be extended by mutual agreement of the Boards of Directors of SUBSIDIARY or MOLYCORP.

In addition, this Agreement of Merger and the Merger contemplated hereby may be terminated and abandoned at any time prior to the approval of the Merger by the stockholders of MOLYCORP as required by the Delaware General Corporation Law, by action of the Board of Directors of either MOLYCORP or SUBSIDIARY at the sole discretion of either of them.

IN WITNESS WHEREOF the parties hereto have caused this Agreement of Merger to be signed in their respective corporate names by their respective Presidents and their respective corporate seals to be affixed hereto and attested by their respective Secretaries, as of the day and year first above written.

MOLYCORP, INC.

(CORPORATE SEAL)

By.....
President

Attest:

.....
Secretary

UNION OIL SUBSIDIARY, INC.

(CORPORATE SEAL)

By.....
Vice President

Attest:

.....
Secretary

IN WITNESS WHEREOF, Union Oil Subsidiary, Inc. and Molycorp, Inc. have caused this Agreement to be signed in their respective names by their respective Presidents or Vice Presidents and their respective Secretaries or Assistant Secretaries and their respective corporate seals to be hereunto affixed and attested by their respective Secretaries or Assistant Secretaries on the day of, 1977.

UNION OIL SUBSIDIARY, INC. (Seal)

By
Vice President

By
Secretary

Attest:

.....
Secretary

MOLYCORP, INC. (Seal)

By
President

By
Secretary

Attest:

.....
Secretary

CERTIFICATE OF THE SECRETARY
OF
UNION OIL SUBSIDIARY, INC.

I,, the Secretary of Union Oil Subsidiary, Inc., hereby certify that the Agreement of Merger to which this certificate is attached, after having been first duly signed on behalf of the corporation by the Vice President and the Secretary under the corporate seal of the said corporation, was duly approved by the written consent of the sole stockholder of Union Oil Subsidiary, Inc. dated, 1977.

WITNESS my hand and seal of said Union Oil Subsidiary, Inc. this day of, 1977.

.....(Seal)
Secretary

CERTIFICATE OF THE SECRETARY

OF

MOLYCORP, INC.

I,, the Secretary of Molycorp, Inc., hereby certify that the Agreement of Merger to which this certificate is attached, after having been first duly signed on behalf of the corporation by the President and Secretary of said corporation under the corporate seal of the said corporation, was duly submitted to the stockholders of Molycorp, Inc. at a special meeting thereof called for the purpose of considering and acting upon the proposed Plan and Agreement of Merger and held after due notice on the day of, 1977, and that at least a majority of the total number of the outstanding shares of the stock of said corporation entitled to vote thereon voted for the adoption of the said Agreement of Merger.

WITNESS my hand and seal of said Molycorp, Inc. this day of, 1977.

.....(Seal)
Secretary

STATE OF }
COUNTY OF } SS:

BE IT REMEMBERED that on this day of, 1977, personally came before me,, a Notary Public in and for the County and State aforesaid,, a Vice President of UNION OIL SUBSIDIARY, INC., a corporation of the State of Delaware and one of the corporations described in the foregoing instrument, known to me personally to be such, and that he, the said, as such Vice President, duly executed said instrument before me and acknowledged the said instrument to be his act and deed and the act, deed and agreement of said corporation, and that the facts stated therein are true.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year first aforesaid.

.....(SEAL)
Notary Public

STATE OF }
COUNTY OF } SS:

BE IT REMEMBERED that on this day of, 1977, personally came before me,, a Notary Public in and for the County and State aforesaid,, Secretary of UNION OIL SUBSIDIARY, INC., a corporation of the State of Delaware and one of the corporations described in the foregoing instrument, known to me personally to be such, and that he, the said, as such Secretary, duly executed and attested to the execution of said instrument before me and acknowledged the said instrument to be his act and deed and the act, deed and agreement of said corporation and that the facts stated therein are true.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year first aforesaid.

.....(SEAL)
Notary Public

STATE OF }
COUNTY OF } ss.:

BE IT REMEMBERED that on this day of, 1977, personally came before me,, a Notary Public in and for the County and State aforesaid,, President of MOLYCORP, INC., a corporation of the State of Delaware and one of the corporations described in the foregoing instrument, known to me personally to be such, and that he, the said, as such President, duly executed said instrument before me and acknowledged the said instrument to be his act and deed and the act, deed and agreement of said corporation, and that the facts stated therein are true.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year first aforesaid.

.....(SEAL)
Notary Public

STATE OF }
COUNTY OF } ss.:

BE IT REMEMBERED that on this day of, 1977, personally came before me,, a Notary Public in and for the County and State aforesaid,, Secretary of MOLYCORP, INC., a corporation of the State of Delaware and one of the corporations described in the foregoing instrument, known to me personally to be such, and that he, the said, as such Secretary, duly executed and attested to the execution of said instrument before me and acknowledged the said instrument to be his act and deed and the act, deed and agreement of said corporation and that the facts stated therein are true.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office the day and year first aforesaid.

.....(SEAL)
Notary Public

U 001277

EXHIBIT B

Union Oil Company of California
461 South Boylston Street
Los Angeles, California 90017

Gentlemen:

I have been advised that I may be deemed an "affiliate" within the meaning of paragraph (c) of Rule 145 of the Rules and Regulations of the Securities and Exchange Commission ("SEC") under the Securities Act of 1933, as amended (the "Act"), of Molycorp, Inc., a Delaware corporation ("Molycorp"), and might have been deemed such at the time the merger of Union Oil Subsidiary, Inc., with and into Molycorp. Pursuant to the Merger, I will acquire shares of the common stock, par value \$8½ per share (the "Shares"), of Union Oil Company of California, a California corporation ("Union"). I agree that I shall not make any sale, transfer or other disposition of the Shares in violation of the Act or the rules and regulations promulgated thereunder by the SEC, and I further agree that I will not sell, transfer or otherwise dispose of any Shares (except by way of contribution to a bona fide charitable institution or to a charitable trust over which I have no control) until after such time as results covering at least 30 days of combined operations of Union and Molycorp have been published by Union.

I have been advised that the issuance of the Shares to me pursuant to the Merger has been registered under the Act on a registration statement on SEC Form S-14. However, I have also been advised that since at the effective time of the Merger I was deemed an "affiliate" of Molycorp any public offering or sale by me of any of the Shares will, under current law, require either (i) the further registration under the Act of the Shares to sold or (ii) compliance with Rule 145 promulgated under the Act or (iii) the availability of another exemption from such registration.

I represent and warrant to Union that:

1. I have carefully read this letter and discussed its requirements and other applicable limitations upon the sale, transfer or other disposition of the Shares, to the extent I felt necessary, with my counsel or counsel for Molycorp.

2. I have been informed by Union that the distribution by me of the Shares has not been registered under the Act and that the Shares must be held by me indefinitely unless (i) such distribution of the Shares has been registered under the Act, (ii) a sale of the Shares is made in conformity with the volume and other applicable limitations of paragraph (d) of Rule 145 promulgated by the SEC under the Act, or (iii) some other exemption from registration is available with respect to any such proposed sale, transfer or other disposition of the Shares.

3. I understand that Union is under no obligation to register the sale, transfer or other disposition of the Shares by me or on my behalf or to take any other action necessary in order to make compliance with an exemption from registration available.

4. I also understand that stop transfer instructions will be given to Union's transfer agents with respect to the Shares and that there will be placed on the certificates for the Shares, or any substitutions therefor, a legend stating in substance:

"The shares represented by this certificate were issued in a transaction to which Rule 145 promulgated under the Securities Act of 1933, as amended (the "Act"), applies and may only be sold in compliance with applicable requirements of Rule 145 promulgated under the Act or sold or otherwise transferred pursuant to a registration statement under the Act or an exemption from such registration."

Very truly yours,

Union agrees that promptly upon the written request of the other party hereto setting forth a proposed sale complying with the requirements of the foregoing legend and supplying such other assurances as Union may reasonably request, Union will promptly take such action as may be required to facilitate the proposed transfer, including without limitation, the giving of appropriate instructions to the transfer agent for the Union Common Stock.

UNION OIL COMPANY OF CALIFORNIA

By _____

U 001278

U 001279

PART II. INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 3. Interest of Experts Named in Registration Statement.

None.

Item 4. Indemnification of Directors and Officers.

ARTICLE IV of Union Oil Company of California's By-Laws provide as follows:

"The corporation shall, to the maximum extent permitted by the General Corporation Law of California, indemnify each of its directors and officers against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding arising by reason of the fact any such person is or was a director or officer of the corporation and shall advance to such director or officer expenses incurred in defending any such proceeding to the maximum extent permitted by such law. For purposes of this section, a "director" or "officer" of the corporation includes any person who is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, or other enterprise, or was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation. The board of directors may in its discretion provide by resolution for such indemnification of, or advance of expenses to, other employees or agents of the corporation, and likewise may refuse to provide for such indemnification or advance of expenses except to the extent such indemnification is mandatory under the California General Corporation law."

The subject of indemnification of directors and officers is governed by Section 317 of the California General Corporation Law. The text of this Section is set forth below.

(a) For the purposes of this section, "agent" means any person who is or was a director, officer, employee or other agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise, or was a director, officer, employee or agent of a foreign or domestic corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation; "proceeding" means any threatened, pending or completed action or proceeding, whether civil, criminal, administrative or investigative; and "expenses" includes without limitation attorneys' fees and any expenses of establishing a right to indemnification under subdivision (d) or paragraph (3) of subdivision (e).

(b) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any proceeding (other than an action by or in the right of the corporation) by reason of the fact that such person is or was an agent of the corporation, against, expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with such proceeding if such person acted in good faith and in a manner such person reasonably believed to be in the best interests of the corporation and, in the case of a criminal proceeding, had no reasonable cause to believe the conduct of such person was unlawful. The termination of any proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in the best interests of the corporation or that the person had reasonable cause to believe that the person's conduct was unlawful.

(c) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person is or was an agent of the corporation, against expenses actually and reasonably incurred by such person in connection with the defense or settlement of such action if such person acted in good faith, in a manner such person believed to be in the best interests of the corporation and with such care, including reasonable inquiry, as an ordinarily prudent person in a like position would use under similar circumstances. No indemnification shall be made under this subdivision (c):

(1) In respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation in the performance of such person's duty to the corporation, unless and only to the extent that the court in which such action was brought shall determine upon application that, in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for the expenses which such court shall determine;

(2) Of amounts paid in settling or otherwise disposing of a threatened or pending action, with or without court approval; or

(3) Of expenses incurred in defending a threatened or pending action which is settled or otherwise disposed of without court approval.

(d) To the extent that an agent of a corporation has been successful on the merits in defense of any proceeding referred to in subdivision (b) or (c) or in defense of any claim, issue or matter therein, the agent shall be indemnified against expenses actually and reasonably incurred by the agent in connection therewith.

(e) Except as provided in subdivision (d), any indemnification under this section shall be made by the corporation only if authorized in the specific case, upon a determination that indemnification of the agent is proper in the circumstances because the agent has met the applicable standard of conduct set forth in subdivision (b) or (c), by:

(1) A majority vote of a quorum consisting of directors who are not parties to such proceeding;

(2) Approval of the shareholders (Section 153), with the shares owned by the person to be indemnified not being entitled to vote thereon; or

(3) The court in which such proceeding is or was pending upon application made by the corporation or the agent or the attorney or other person rendering services in connection with the defense, whether or not such application by the agent, attorney or other person is opposed by the corporation.

(f) Expenses incurred in defending any proceeding may be advanced by the corporation prior to the final disposition of such proceeding upon receipt of an undertaking by or on behalf of the agent to repay such amount unless it shall be determined ultimately that the agent is entitled to be indemnified as authorized in this section.

(g) No provision made by a corporation to indemnify its or its subsidiary's directors or officers for the defense of any proceeding, whether contained in the articles, bylaws, a resolution of shareholders or directors, an agreement or otherwise, shall be valid unless consistent with this section. Nothing contained in this section shall affect any right to indemnification to which persons other than such directors and officers may be entitled by contract or otherwise.

(h) No indemnification or advance shall be made under this section, except as provided in subdivision (d) or paragraph (3) of subdivision (e), in any circumstance where it appears:

(1) That it would be inconsistent with a provision of the articles, bylaws, a resolution of the shareholders or an agreement in effect at the time of the accrual of the alleged cause of action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(2) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

(i) A corporation shall have power to purchase and maintain insurance on behalf of any agent of the corporation against any liability asserted against or incurred by the agent in such capacity or arising out of the agent's status as such whether or not the corporation would have the power to indemnify the agent against such liability under the provisions of this section.

(j) This section does not apply to any proceeding against any trustee, investment manager or other fiduciary of an employee benefit plan in such person's capacity as such, even though such person may also be an agent as defined in subdivision (a) of the employer corporation. Nothing contained in this section shall limit any right to indemnification to which such a trustee, investment manager or other fiduciary may be entitled by contract or otherwise, which shall be enforceable to the extent permitted by applicable law other than this section.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 by the registrant may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

Under a directors' and officers' liability insurance policy, directors and officers of Union Oil Company of California are insured against certain liabilities, including certain liabilities under the Securities Act of 1933.

Item 5. Exhibits Filed.

The following Exhibits are filed as part of this Registration Statement:

<u>Exhibit No.</u>	<u>Description</u>
1-1	—Agreement and Plan of Reorganization dated as of May 18, 1977 by and among Union Oil Company of California, Union Oil Subsidiary, Inc. and Molycorp, Inc. (included as Annex 1 to the Proxy Statement filed as part of this Registration Statement). (Schedules Omitted)
1-2	—Agreement of Merger between Molycorp, Inc. and Union Oil Subsidiary, Inc. (included as Exhibit A to Annex 1 to the Proxy Statement filed as part of this Registration Statement). (Schedules Omitted)
2.	—Form of Proxy for holders of Common Stock of Molycorp, Inc.
5.	—Opinion of George C. Bond, Esq.
6-(a)	—Specimen certificates for Common Stock, par value \$8½ per share, of Union Oil Company of California.
(b)	—Articles of Incorporation and By-laws of Union Oil Company of California.

Item 6. Undertaking to File Prospectuses as Amendments.

The undersigned registrant hereby undertakes as follows:

(a) That prior to any public reoffering of the securities registered hereunder through the use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the registrant undertakes that such reoffering prospectus will contain, or will be amended to contain the information called for by Item 2 with respect to the securities to be so offered, in addition to the information called for by the other items of Form S-14.

(b) That every prospectus which is filed pursuant to paragraph (a) above, or which purports to meet the requirements of Section 10(a)(3) of the Act, will be filed as a part of an amendment to the registration statement and will not be used until such amendment has become effective, and that for the purpose of determining liabilities under the Act, the effective date of such amendment shall be deemed the effective date of the registration statement with respect to securities sold after such amendment has become effective.

(c) The undersigned registrant hereby undertakes to remove from registration by means of a post-effective amendment any of the securities being registered which are not issued pursuant to the Agreement of Merger or Agreement and Plan of Reorganization and to furnish the Division of Corporation Finance with a letter informing such Division when all of the securities registered have been issued.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement or amendment to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Los Angeles, and State of California, on the 18th day of May, 1977.

UNION OIL COMPANY OF CALIFORNIA

By CHARLES F. PARKER
(Charles F. Parker, Senior Vice President)

Pursuant to the requirements of the Securities Act of 1933, this registration statement or amendment has been signed below by the following persons in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>FRED L. HARTLEY</u> (Fred L. Hartley)	Chairman of the Board, President and Director (Principal Executive Officer)	May 18, 1977
<u>CHARLES F. PARKER</u> (Charles F. Parker)	Senior Vice President and Director (Principal Financial Officer)	May 18, 1977
<u>PHILIP BLAMEY</u> (Philip Blamey)	Comptroller (Principal Accounting Officer)	May 18, 1977
<u>WILLIAM F. BALLHAUS</u> (William F. Ballhaus)	Director	May 18, 1977
<u>CLAUDE S. BRINEGAR</u> (Claude S. Brinegar)	Director	May 18, 1977
<u>RAY A. BURKE</u> (Ray A. Burke)	Director	May 18, 1977
<u>ROBERT DI GIORGIO</u> (Robert Di Giorgio)	Director	May 18, 1977
<u>WILLIAM H. DOHENY</u> (William H. Doheny)	Director	May 18, 1977
<u>PRENTIS C. HALE</u> (Prentis C. Hale)	Director	May 18, 1977
<u>T. C. HENDERSON</u> (T. C. Henderson)	Director	May 18, 1977
<u>DONALD P. JACOBS</u> (Donald P. Jacobs)	Director	May 18, 1977
<u>W. S. McCONNOR</u> (W. S. McConnor)	Director	May 18, 1977
<u>PETER O'MALLEY</u> (Peter O'Malley)	Director	May 18, 1977
<u>DONN B. TATUM</u> (Donn B. Tatum)	Director	May 18, 1977

CONSENT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

We consent to the inclusion in this Registration Statement of our Report dated February 14, 1977, accompanying the consolidated financial statements of Union Oil Company of California. We also consent to all references to our firm in the proxy statement forming part of such Registration Statement.

COOPERS & LYBRAND

Los Angeles, California
May 18, 1977

CONSENTS OF INDEPENDENT PUBLIC ACCOUNTANTS

We consent to the inclusion in this Registration Statement of our Report dated February 18, 1977, accompanying the consolidated financial statements of MolyCorp, Inc. We also consent to all references to our firm in the proxy statement forming part of such Registration Statement.

D. G. SISTERSON & COMPANY

New York, New York
May 18, 1977

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the use in the Prospectus constituting part of this Registration Statement on Form S-14 of our Report dated January 3, 1977 (except as to Note 8 for which the date is February 28, 1977), relating to the consolidated financial statements of Companhia Brasileira de Metalurgia e Mineracao which appear in such Prospectus. We also consent to the references to us under the heading "Experts" in such Prospectus.

PRICE WATERHOUSE & CO.

Rio de Janeiro, Brazil
May 18, 1977

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

We hereby consent to the use in this Registration Statement of our opinion dated February 28, 1977 appearing in the Prospectus which is a part of such Registration Statement and to the reference to us under the heading "Experts" in such Prospectus.

HASKINS & SELLS

Philadelphia, Pennsylvania
May 19, 1977

CONSENT OF COUNSEL

The consent of George C. Bond, Vice President and General Counsel of Union Oil Company of California, is included in the opinion filed as Exhibit 5 to the Registration Statement.

CONSENT OF PERSON ABOUT TO BECOME DIRECTOR

I hereby consent to the use in the Proxy Statement which constitutes the Prospectus included in this Registration Statement of Union Oil Company of California of the reference to me under the headings THE MERGER—Board of Director's Recommendation and MANAGEMENT OF UNION.

LEWIS B. HARDER

New York, New York
May 18, 1977

II-10

U 001289

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

Amendment No. 1

to

FORM S-14

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

Union Oil Company of California

(Exact name of registrant as specified in its charter)

California
(State or other jurisdiction of
incorporation or organization)

95-1315450
(I.R.S. Employer
Identification No.)

UNION OIL CENTER

Los Angeles, California 90017

(Address of principal executive offices, including Zip Code)

Registrant's telephone number, including area code (213) 486-7600

R. O. HEDLEY, Secretary

Union Oil Center

Los Angeles, California 90017

(Name and address of agent for service)

Copies to:

GEORGE C. BOND, Esq.
Union Oil Center
Los Angeles, California 90017

KELLER, McSWAIN, WING &
MAXFIELD
2570 First of Denver Plaza
633 Seventeenth Street
Denver, Colorado 80202

Approximate date of commencement of the proposed sale of the securities to the public: The date of mailing the within proxy statement to the stockholders of Silver Bell Industries, Inc. and The Mancos Corporation.

CALCULATION OF REGISTRATION FEE

Title of Securities being registered	Amount being registered	Proposed maximum offering price per unit	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value \$8½ per share.....	425,000(1)	\$50.00(2)	\$21,250,000(2)	\$4,250

- (1) Includes 418,095 shares issuable in exchange for substantially all of the assets of Silver Bell Industries, Inc. and 6,905 shares issuable in exchange for substantially all of the assets of The Mancos Corporation.
- (2) Based upon the last reported sale price (\$50.00 per share) on September 5, 1978 of Common Stock, par value \$8½ per share, of Union Oil Company of California pursuant to Rule 457(b) under the Securities Act of 1933.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

U 002949

UNION OIL COMPANY OF CALIFORNIA

CROSS REFERENCE SHEET

(Pursuant to Rule 404(c) showing the location in the Prospectus of the responses to the Items of Part 1 of Form S-14)

Item Number on Schedule 14-A	Caption	Heading in Prospectus
1.	Revocability of Proxy.....	Joint Proxy Statement
2.	Dissenters' Rights of Appraisal.....	Summary of Proxy Statement — Acquisition of Silver Bell — Vote Required for Approval; Dissenting Stockholders; Acquisition of Mancos — Vote Required for Approval; Dissenting Stockholders; The Silver Bell Acquisition — Rights of Dissenting Shareholders; The Mancos Acquisition — Rights of Dissenting Shareholders; Rights of Dissenting Shareholders of Silver Bell and Mancos
3.	Persons Making Our Solicitation.....	Joint Proxy Statement; Miscellaneous
4.	Interest of Certain Persons in Matters To Be Acted Upon.....	Acquisition of Silver Bell — Board of Directors Recommendation; Acquisition of Mancos — Board of Directors Recommendation; Management and Control of Silver Bell; Management and Control of Mancos
5.	Voting Securities and Principal Holders Thereof.....	Joint Proxy Statement; Management and Control of Silver Bell; Management and Control of Mancos
6.	Nominees and Directors.....	Management of Union
7.	Remuneration and Other Transactions With Management and Others.....	Management of Union; Management and Control of Silver Bell; Management and Control of Mancos
8.	Relationship with Independent Public Accountants.....	*
9.	Bonus, Profit Sharing and Other Remuneration Plans.....	*
10.	Pension and Retirement Plans.....	*
11.	Options, Warrants or Rights.....	*
12.	Authorization or Issuance of Securities Otherwise than For Exchange.....	*
13.	Modification or Exchange of Securities.....	*

U 002950

CROSS REFERENCE SHEET (Continued)

Item Number on Schedule 14-A	Caption	Heading in Prospectus
14.	Mergers, Consolidations, Acquisitions and Similar Matters.....	Summary of Joint Proxy Statement; Purpose of the Silver Bell Meeting; The Silver Bell Acquisition — Board of Directors Recommendation — Distribution of Union Common Stock; Fractional Shares — Resales of Union Common Stock by Silver Bell Affiliates — Effective Time of the Silver Bell Acqui- sition — Certain Terms of the Silver Bell Agreement — Rights of Dissenting Shareholders; Purpose of the Mancos Meeting; The Mancos Acquisition — Board of Directors Recommendation — Distribution of Union Common Stock; Fractional Shares — Resales of Union Common Stock by Mancos Affiliates — Effective Time of the Mancos Acquisition — Certain Terms of the Mancos Agreement — Rights of Dis- senting Shareholders; Expenses; Rights of Dissenting Shareholders of Silver Bell and Mancos; Description of Common Shares of Union; Some Differences Be- tween Colorado and California Corporation Laws; Business and Properties of Union; Business and Properties of Silver Bell; Business and Properties of Mancos; Union Oil Company of California and Con- solidated Subsidiaries Capitalization; Capitalization of Silver Bell and Mancos; Union Oil Company of California and Consolidated Subsidiaries — State- ment of Consolidated Earnings; Silver Bell — State- ments of Operations; Mancos — Statement of Oper- ations; Comparative Market Prices of Union and Silver Bell Common Stock; Pro Forma Financial Data; Comparative Per Share Data
15.	Financial Statements.....	Sec: Table of Contents
16.	Acquisition of Disposition of Property.....	*
17.	Restatement of Accounts.....	*
18.	Action with Respect to Reports.....	*
19.	Matters Not Required to be Submitted.....	*
20.	Amendment of Charter, Bylaws or Other Documents.....	*
21.	Other Proposed Action.....	*
22.	Vote Required for Approval.....	Letter to Shareholders of Silver Bell; Letter to Share- holders of Mancos; Joint Proxy Statement; Summary of Joint Proxy Statement; Acquisition of Silver Bell — Vote Required for Approval; Dissenting Share- holders; Acquisition of Mancos — Vote Required for Approval; Dissenting Shareholders; The Silver Bell Acquisition — Vote Required; The Mancos Acqui- sition — Vote Required

* Inapplicable.

U 002951

EXPLANATORY NOTE

The Proxy Statement included in this Registration Statement is intended to be used jointly by Silver Bell Industries, Inc. ("Silver Bell") and The Mancos Corporation ("Mancos") in connection with the exchange of Common shares of Union Oil Company of California ("Union") for substantially all of the assets of said corporations and also constitutes a Prospectus of Union. The letter and Notice of Special Meeting of Shareholders addressed to shareholders of Silver Bell will be included only in the Proxy Statement sent to Silver Bell's shareholders and the letter and Notice of Special Meeting of Shareholders addressed to shareholders of Mancos will be included only in the Proxy Statement sent to Mancos' shareholders.

U 002952

SILVER BELL INDUSTRIES, INC.

TO ALL SHAREHOLDERS:

Enclosed you will find proxy materials for a Special Meeting of Shareholders of Silver Bell Industries, Inc. ("Silver Bell") which will be held at the Forum Room, United Bank of Denver, 1740 Broadway, Denver, Colorado, on, 1978.

Detailed descriptive materials concerning the proposed acquisition, the number of Union shares to be issued to Silver Bell, and other matters are set forth in the enclosed Joint Proxy Statement. This proposal is important to each shareholder and should be considered carefully.

Since early 1976, Silver Bell has received a number of inquiries from companies which expressed interest in acquiring all of Silver Bell's assets. In many instances, it was learned during the course of preliminary discussions that there was no basis on which further negotiations could be carried on. In three instances, the negotiations progressed further. In the first such instance, Silver Bell gave an option to an interested company to purchase only its 35% interest in some of its uranium properties located in Wyoming. Subsequent negotiations were conducted for the sale of all of Silver Bell's assets to the same company for a greater number of shares but a final agreement was never reached. In the second instance, Silver Bell gave an interested company a period of time in which to evaluate its properties on an exclusive basis. An offer was never received from the second company. In the third instance, Silver Bell received an offer from a company which expressed a willingness to purchase Silver Bell's assets for a smaller number of shares than Silver Bell was willing to accept. That company explained that it could not meet Silver Bell's terms because, among other things, there was too much business risk involved in the development of Silver Bell's uranium property.

The amount of consideration to be paid in stock by Union Oil Company of California for Silver Bell's assets as described in the proxy statement, of which this letter is a part, is the best offer received by Silver Bell in the more than two years of negotiations with many companies. We sincerely feel that completion of the agreement is in the best interest of all Silver Bell stockholders and recommend to you that you should vote your proxies affirmatively in favor of the Union-Minerals agreement. Under Colorado law, the affirmative vote of 66⅔% or more of all of the outstanding stock is needed to authorize completion of the transaction. For this reason, do not fail to mark and return the enclosed proxy. Every vote is important!

Sincerely,

Eugene H. Sanders
President

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION NOR HAS THE COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Union has filed a Registration Statement with the Securities and Exchange Commission covering the shares of Union Common Stock to be issued in connection with the acquisition of substantially all of the assets of Silver Bell. The Joint Proxy Statement also constitutes a Prospectus of Union filed as part of such Registration Statement.

The date of this Prospectus is, 1978

U 002953

THE MANCOS CORPORATION

TO ALL SHAREHOLDERS:

Enclosed you will find proxy materials for a Special Meeting of Shareholders of The Mancos Corporation ("Mancos") which will be held at the Forum Room, United Bank of Denver, 1740 Broadway, Denver, Colorado on _____, 1978.

Detailed descriptive materials concerning the proposed acquisition, the number of Union shares to be issued to Mancos, and other matters are set forth in the enclosed Joint Proxy Statement. This proposal is important to each shareholder and should be considered carefully.

As you recall, on September 6, 1973, Mancos entered into an agreement with Silver Bell Industries, Inc. ("Silver Bell"), under which Silver Bell agreed to issue 125,000 shares of its common stock for all of Mancos' assets. Due to problems encountered by Silver Bell, involving litigation with other parties and an inadequate number of shares in Silver Bell's unissued stock account until additional shares were authorized by stockholders in 1977, it was impossible during most of the intervening period to consummate the Silver Bell-Mancos agreement.

Silver Bell has now entered into an agreement with Union Oil Company of California ("Union") and Union's wholly-owned subsidiary, Minerals Exploration Company ("Minerals"), under which Minerals will acquire substantially all of Silver Bell's assets in consideration for 418,095 shares of Union's Common Stock. In a separate agreement with Mancos, Union has agreed to issue 6,905 shares of its Common Stock in exchange for substantially all of the assets of Mancos, if and only if: (a) the Union-Minerals-Silver Bell transaction is consummated; and (b) the holders of at least two-thirds ($\frac{2}{3}$) of the outstanding shares of Mancos approve the Union-Minerals-Mancos transaction. The number of Union shares to be issued to Mancos' stockholders is equal to the number of shares which would have been so issued had the Silver Bell-Mancos transaction been completed and Union issued 425,000 shares in exchange for the Silver Bell assets. See THE SILVER BELL ACQUISITION — The Silver Bell-Mancos Transaction and THE MANCOS ACQUISITION — Board of Directors Recommendation.

If the agreements with Union and Minerals are not consummated, the Silver Bell-Mancos agreement will be reinstated.

We sincerely feel that completion of the agreement is in the best interest of all Mancos stockholders and recommend to you that you should vote your proxies affirmatively in favor of the Union-Minerals agreement. Under Colorado law, the affirmative vote of 66 $\frac{2}{3}$ % or more of all of the outstanding stock is needed to authorize completion of the transaction. For this reason, do not fail to mark and return the enclosed proxy. Every vote is important!

Sincerely,

Earl J. Brubaker
President

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION NOR HAS THE COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

Union has filed a Registration Statement with the Securities and Exchange Commission covering the shares of Union Common Stock to be issued in connection with the acquisition of substantially all of the assets of Mancos. The Joint Proxy Statement also constitutes a Prospectus of Union filed as part of such Registration Statement.

The date of this Prospectus is _____, 1978

U 002954

SILVER BELL INDUSTRIES, INC.

**NOTICE OF SPECIAL MEETING OF SHAREHOLDERS
TO BE HELD _____, 1978.**

NOTICE IS HEREBY GIVEN that a Special Meeting of Shareholders of Silver Bell Industries, Inc. ("Silver Bell"), a Colorado corporation, will be held at the Forum Room, United Bank of Denver, on _____, 1978 at 10:00 a.m., local time, for the following purposes:

1. To consider and vote upon a proposal calling for approval and adoption of the Agreement and Plan of Reorganization by and among Silver Bell, Union Oil Company of California, a California corporation ("Union"), and Minerals Exploration Company, a California corporation and wholly-owned subsidiary of Union, ("Minerals"), a copy of which is attached as Annex III to the Proxy Statement accompanying this Notice, including approval and adoption of (a) the sale of substantially all of the assets, except for cash on hand, of Silver Bell to Minerals in exchange for 418,095 shares of Union's Common Stock and (b) winding up, dissolution and liquidation of Silver Bell under a Plan of Liquidation, a copy of which is attached as Annex I to the Joint Proxy Statement accompanying this Notice, with distribution of the assets of Silver Bell (principally Union Common Stock) as set forth in the Joint Proxy Statement.

2. To transact such other business as may properly come before the Meeting, or at any adjournment thereof.

Shareholders of record at the close of business on _____, 1978 shall be entitled to notice of and to vote at the Meeting.

By Order of the Board of Directors

Eugene H. Sanders
President

Dated: _____, 1978.

IMPORTANT

IF YOU DO NOT EXPECT TO ATTEND THE MEETING, PLEASE SIGN, DATE AND MAIL PROMPTLY THE ENCLOSED PROXY IN THE ENCLOSED STAMPED, ADDRESSED ENVELOPE IN ORDER THAT A QUORUM MAY BE PRESENT AT THE MEETING AND THAT YOUR SHARES MAY BE VOTED FOR YOU.

U 002955

THE MANCOS CORPORATION

**NOTICE OF SPECIAL MEETING OF SHAREHOLDERS
TO BE HELD, 1978**

NOTICE IS HEREBY GIVEN that a Special Meeting of Shareholders of The Mancos Corporation ("Mancos"), a Colorado corporation, will be held at the Forum Room, United Bank of Denver, Denver, Colorado on, 1978 at 2:00 p.m., local time, for the following purposes:

1. To consider and vote upon a proposal calling for approval and adoption of the Agreement and Plan of Reorganization by and among Mancos, Union Oil Company of California, a California corporation ("Union"), and Minerals Exploration Company, a California corporation and wholly-owned subsidiary of Union ("Minerals"), a copy of which is attached as Annex IV to the Proxy Statement accompanying this Notice, including approval and adoption of (a) the sale of substantially all of the assets, except for cash on hand, of Mancos to Minerals in exchange for 6,905 shares of Union's Common Stock and (b) winding up, dissolution and liquidation of Mancos under a Plan of Liquidation, a copy of which is attached as Annex II to the Joint Proxy Statement accompanying this Notice, with distribution of the assets of Mancos (principally Union Common Stock) as set forth in the Proxy Statement.

2. To transact such other business as may properly come before the Meeting, or at any adjournment thereof.

Shareholders of record at the close of business on, 1978 shall be entitled to notice of and to vote at the Meeting.

By Order of the Board of Directors

Earl J. Brubaker
President

Dated:, 1978

IMPORTANT

IF YOU DO NOT EXPECT TO ATTEND THE MEETING, PLEASE SIGN, DATE AND MAIL PROMPTLY THE ENCLOSED PROXY IN THE ENCLOSED STAMPED, ADDRESSED ENVELOPE IN ORDER THAT A QUORUM MAY BE PRESENT AT THE MEETING AND THAT YOUR SHARES MAY BE VOTED FOR YOU.

U 002956

SILVER BELL INDUSTRIES, INC.
THE MANCOS CORPORATION
SPECIAL MEETINGS OF SHAREHOLDERS
1978
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SUMMARY OF JOINT PROXY STATEMENT

Introduction:

Minerals Exploration Company, a California corporation and a wholly-owned subsidiary of Union Oil Company of California ("Minerals" and "Union", respectively) has agreed to acquire substantially all of the assets of Silver Bell Industries, Inc., a Colorado corporation ("Silver Bell"), for 418,095 shares of Union's Common Stock. Minerals has also agreed to acquire substantially all of the assets of The Mancos Corporation, a Colorado corporation ("Mancos"), for 6,905 shares of Union's Common Stock. This Proxy Statement will be used jointly by Silver Bell and Mancos in connection with both acquisitions. This Proxy Statement constitutes a Prospectus of Union.

Acquisition of Silver Bell

Purpose of the Silver Bell Meeting:

The shareholders of Silver Bell are being asked to consider and approve an Agreement and Plan of Reorganization among Silver Bell, Union and Minerals which provides for the acquisition of substantially all of the assets, except for cash on hand, in banks (including certificates of deposit) and on deposit with third parties (the "Assets"), of Silver Bell by Minerals in exchange for 418,095 shares of Union's Common Stock, par value \$8½ per share, ("Union Common Stock") (the "Silver Bell Acquisition"). Neither Union nor Minerals will assume any obligations of Silver Bell except for obligations to Minerals in connection with the Sweetwater Project and a promissory note in the principal amount of \$50,000, plus accrued interest, payable to Mancos. Silver Bell will continue to be liable to satisfy any other obligations existing at the completion of the Silver Bell Acquisition. Aside from the described obligations and the obligations which will arise in connection with the completion of the sale-of-assets transaction described herein (See EXPENSES on Page 16 hereof), Silver Bell has no known obligations. Silver Bell will pay all such current obligations prior to or in the course of liquidation. See BUSINESS AND PROPERTIES OF SILVER BELL — The Sweetwater Project.

After the transfer of the Assets to Minerals is completed, it is contemplated that the shares of Union Common Stock issued to Silver Bell as consideration for such transfer (except to the extent that sales of such shares may be made to provide cash to pay persons entitled to fractional shares, to pay expenses of Silver Bell and to make payments to any dissenting Silver Bell shareholders) will be distributed to the shareholders of Silver Bell in complete liquidation of Silver Bell according to their respective interests and that Silver Bell will then be dissolved pursuant to applicable law. Based upon estimates of Silver Bell's management of the expenses of the Acquisition and the available cash and liabilities at the time the Acquisition is completed, and assuming that there are no dissenting shareholders, approximately 414,085 shares of Union Common Stock will be available for distribution to Silver Bell's shareholders either in shares or in cash representing payment for fractional shares and a Silver Bell shareholder will receive approximately .054 shares of Union Common Stock for each Silver Bell share he holds. Such exchange ratio is subject to change if any of the foregoing assumptions prove incorrect. See PURPOSE OF THE SILVER BELL MEETING at Page 4, THE SILVER BELL ACQUISITION — Distribution of Union Common Stock; Fractional Shares at Page 7, and EXPENSES at Page 16.

Union's Common Stock is listed on the New York, Midwest and Pacific Stock Exchanges. Recent market prices of Silver Bell and Union Common Stock are set forth under COMPARATIVE MARKET PRICES OF UNION AND SILVER BELL COMMON STOCK at Page 20. Mancos' Common Shares are not publicly traded.

Vote Required for Approval; Dissenting Stockholders:

Approval of the sale of substantially all of Silver Bell's assets and the dissolution of Silver Bell will require the affirmative vote of holders of not less than two-thirds of the outstanding shares of Silver Bell Common Stock entitled to vote at the meeting.

Under the Colorado Corporation Code, shareholders who object to the proposed sale of substantially all of Silver Bell's assets and the dissolution of Silver Bell may, upon compliance with certain legal requirements, receive the fair value of their shares in cash. See **RIGHTS OF DISSENTING SHAREHOLDERS OF SILVER BELL AND MANCOS** at Page 17. Should holders of 5% or more of Silver Bell's shares so act, however, Silver Bell will not be obligated to complete the transfer of its assets and, if the transfer is not effected, no cash payments will be made. See **THE SILVER BELL ACQUISITION — Certain Terms of the Silver Bell Agreement — Amendments, Conditions and Termination Provisions** at Page 10.

Federal Income Taxes:

Silver Bell has received the opinion of its tax counsel, Reardon, Reardon and Reardon, a professional corporation, Denver, Colorado to the effect that the acquisition of substantially all of Silver Bell's assets for shares of Union Common Stock will constitute a tax-free reorganization and that holders of Silver Bell Common Stock will not incur taxable gain or loss as a result of the transactions, except to the extent of cash received in lieu of fractional shares or for dissenting shares. See **THE SILVER BELL ACQUISITION — Federal Income Tax Consequences** at Page 7.

Acquisition of The Mancos Corporation

Purpose of the Mancos Meeting:

The shareholders of Mancos are being asked to consider and approve an Agreement and Plan of Reorganization among Mancos, Union and Minerals which provides for the acquisition of substantially all of the assets, except for cash on hand, in banks and on deposit with third parties (the "Mancos Assets"), of Mancos by Minerals in exchange for 6,905 shares of Union's Common Stock, par value \$8½ per share, ("Union Common Stock") (the "Mancos Acquisition"). Neither Union nor Minerals will assume any obligations of Mancos, which will continue to be liable to satisfy any obligations existing at the completion of the Mancos Acquisition. Aside from the described obligations and the obligations which will arise in connection with the completion of the sale-of-assets transaction described herein (See **EXPENSES** on Page 16 hereof), Mancos has no known obligations. Mancos will pay all such current obligations prior to or in the course of liquidation.

After the transfer of the Mancos Assets to Minerals is completed, it is contemplated that the shares of Union Common Stock issued to Mancos as consideration for such transfer (except to the extent that sales of such shares may be made to provide cash to pay persons entitled to fractional shares, to pay expenses of Mancos and to make payments to any dissenting Mancos shareholders) will be distributed to the shareholders of Mancos in complete liquidation of Mancos according to their respective interests and that Mancos will then be dissolved pursuant to applicable law. Based upon estimates of Mancos' management of the expenses of the Mancos Acquisition and the available cash at the time the Mancos Acquisition is completed, and assuming that there are no dissenting shareholders and that 150 Union shares will be sold to provide cash to pay persons entitled to fractional shares, approximately 6,755 shares of Union Common Stock will remain for distribution to Mancos' shareholders upon dissolution of Mancos and a Mancos shareholder will receive approximately .0038 shares of Union Common Stock for each Mancos common share he holds. Such exchange ratio is subject to change if any of the foregoing assumptions prove incorrect. See **PURPOSE OF THE MANCOS MEETING** at Page 11, **THE MANCOS ACQUISITION — Distribution of Union Common Stock; Fractional Shares** at Page 13, and **EXPENSES** at Page 16.

Union's Common Stock is listed on the New York, Midwest and Pacific Stock Exchanges. Recent market prices of Union Common Stock are set forth under **COMPARATIVE MARKET PRICES OF UNION AND SILVER BELL COMMON STOCK** at Page 20. Mancos' Common Shares are not publicly traded.

Vote Required for Approval; Dissenting Stockholders:

Approval of the sale of substantially all of Mancos' assets and dissolution of Mancos will require the affirmative vote of holders of not less than two-thirds of the outstanding shares of Mancos Common Stock entitled to vote at the meeting.

Under the Colorado Corporation Code, shareholders who object to the proposed sale of substantially all of Mancos' assets and the dissolution of Mancos may, upon compliance with certain legal requirements, receive the fair value of their shares in cash. See **RIGHTS OF DISSENTING SHAREHOLDERS OF SILVER BELL AND MANCOS** at Page 17. Should holders of 20% or more of Mancos' shares so act, however, Mancos will not be obligated to complete the transfer of its assets and, if the transfer is not effected, no cash payments will be made. See **THE MANCOS ACQUISITION — Certain Terms of the Mancos Agreement — Amendments, Conditions and Termination Provisions** at Page 15.

Federal Income Taxes:

Mancos has received the opinion of tax counsel, Reardon, Reardon and Reardon, a professional corporation, Denver, Colorado to the effect that the acquisition of substantially all of Mancos' assets for shares of Union Common Stock will constitute a tax-free reorganization and that holders of Mancos Common Stock will not incur taxable gain or loss as a result of the transactions, except to the extent of cash received in lieu of fractional shares or for dissenting shares. See **THE MANCOS ACQUISITION — Federal Income Tax Consequences** at Page 13.

Business of Union

Union Oil Company of California, incorporated in California on October 17, 1890, is engaged principally in petroleum, chemical and mineral operations. Petroleum operations involve the exploration, production, transportation and sale of crude oil, natural gas and geothermal resources; and the manufacture, transportation and marketing of petroleum products. Chemical operations involve the manufacture, purchase and marketing of chemicals for industrial and agricultural uses. Mineral operations primarily involve the exploration, development, mining, processing and marketing of molybdenum, columbium, rare earths and uranium. Other operations include real estate development and sales. All phases of business in which Union engages are highly competitive. Union's business will continue to be affected not only by such competition, but by general economic developments, governmental regulations, labor conditions and technological and international developments. See **BUSINESS AND PROPERTIES OF UNION**. Union's Statement of Consolidated Earnings is at Page 24. Union's Consolidated Financial Statements begin at Page 63.

Business of Silver Bell

Silver Bell's principal asset consists of a 35% interest in certain mining claims and leases and the production therefrom (subject to obligations for its proportionate share of costs of development and production) which are subject to an Operating Agreement between Silver Bell and Minerals. Minerals holds a 65% interest in such properties and production and is obligated for 65% of the costs. Minerals has advanced Silver Bell's share of the costs relating to the exploration and development of the Sweetwater Project. Such costs, which approximate \$12,000,000 to date, including interest of 10% per annum on unpaid advances, are required to be repaid out of 90% of Silver Bell's 35% share of production from the Sweetwater Project, if production commences. See **BUSINESS AND PROPERTIES OF SILVER BELL — The Sweetwater Project** at Page 47.

Business of Mancos

Mancos holds patented and unpatented mining claims, together with four buildings and mill equipment in Montezuma County, Colorado. Mancos has not actively engaged in exploration of its properties but has confined its activities to performing annual assessment labor on unpatented mining claims.

SILVER BELL INDUSTRIES, INC.

THE MANCOS CORPORATION

JOINT PROXY STATEMENT

This Proxy Statement is being used jointly as a Proxy Statement of Silver Bell Industries, Inc. and of The Mancos Corporation and also constitutes a Prospectus of Union Oil Company of California.

Proxies in the form accompanying this Joint Proxy Statement are being mailed to shareholders of SILVER BELL INDUSTRIES, INC., a Colorado corporation ("Silver Bell") who will be solicited by the Management of Silver Bell or to shareholders of THE MANCOS CORPORATION, a Colorado corporation ("Mancos") who will be solicited by the Management of Mancos.

The proxies solicited by the Management of Silver Bell will be used at a Special Meeting of Shareholders to be held at the Forum Room, United Bank of Denver, 1740 Broadway, Denver, Colorado on _____, 1978, at 10:00 a.m., local time, or at any adjournment thereof, at which shareholders of record at the close of business on _____ (the "Record Date") shall be entitled to vote.

The proxies solicited by the Management of Mancos will be used at a Special Meeting of Shareholders to be held at the Forum Room, United Bank of Denver, 1740 Broadway, Denver, Colorado on _____, 1978, at 2:00 p.m., local time, or at any adjournment thereof, at which shareholders of record at the close of business on _____ (the "Record Date") shall be entitled to vote.

This Joint Proxy Statement and the accompanying form of proxy are being sent to shareholders on or about _____, and will be sent to all persons who become shareholders of record of Common Stock on or prior to the Record Date.

You are requested to complete, date and sign the accompanying proxy and return it promptly in the enclosed envelope. Proxies will be voted in accordance with the instructions contained therein. If instructions are not given, proxies will be voted in favor of the proposal described herein. Each proxy executed and returned by a shareholder may be revoked at any time before it is voted by giving written notice of such revocation to the Secretary. Revocation is effective only upon receipt of such notice by the Secretary.

As of July 31, 1978 there were outstanding 7,568,388 shares of Silver Bell Common Stock, \$0.25 par value. As of July 15, 1978, there were outstanding 1,765,219 shares of Mancos Common Stock, \$0.01 par value. Approval of the proposal described below will require the affirmative vote of two-thirds of the shares of Common Stock of each corporation outstanding on the Record Date.

PURPOSE OF THE SILVER BELL MEETING

The Special Meeting of Shareholders of Silver Bell has been called to consider and vote upon a proposal to approve and adopt the Agreement and Plan of Reorganization by and among Silver Bell, Union Oil Company of California, a California corporation ("Union") and Minerals Exploration Company, a California corporation and a wholly-owned subsidiary of Union, ("Minerals"). Minerals will acquire substantially all of the assets, except for cash on hand, in banks (including certificates of deposit) and on deposit with third parties of Silver Bell (the "Silver Bell Assets") in exchange for 418,095 shares of Union's Common Stock, par value \$8½ per share ("Union Common Stock"). Union and Minerals will not assume any obligations of Silver Bell except for Silver Bell's obligation to Minerals to repay out of Silver Bell's 35% interest in the Sweetwater Project Silver Bell's share of

operating costs advanced by Minerals, which advances approximate \$12,000,000 to date, Silver Bell's obligation to repay to Minerals a promissory note in the principal amount of \$12,070, plus accrued interest and a promissory note in the principal amount of \$50,000, plus accrued interest, payable to The Mancos Corporation ("Mancos"). Silver Bell will continue to be liable for the satisfaction of any other obligations in existence at the completion of the Silver Bell Acquisition. Aside from the described obligations and the obligations which will arise in connection with the completion of the sale-of-assets transaction described herein (See EXPENSES on Page 16 hereof), Silver Bell has no known obligations. Silver Bell will pay all such current obligations prior to or in the course of liquidation. See BUSINESS AND PROPERTIES OF SILVER BELL — The Sweetwater Project at Page 47.

After the transfer of assets contemplated by the Agreement and Plan of Reorganization (the "Silver Bell Agreement") is completed, it is contemplated that the shares of Union Common Stock issued to Silver Bell as consideration for such transfer (except to the extent that sales of such shares may be made to provide cash to pay persons entitled to fractional shares, to pay expenses of Silver Bell and to make payments to any dissenting Silver Bell shareholders) will be distributed to the shareholders of Silver Bell in complete liquidation of Silver Bell according to their respective interests and that Silver Bell will then be dissolved pursuant to applicable law and the Plan of Liquidation, a copy of which is attached hereto as Annex I.

The Silver Bell Agreement is attached hereto as Annex III. The statements contained in this Joint Proxy Statement with respect to the terms of the Silver Bell Agreement are subject to the more complete information set forth in such Annex and are qualified in their entirety by reference thereto.

VOTE REQUIRED

Approval of the acquisition by Minerals of the Silver Bell Assets (the "Silver Bell Acquisition") and the dissolution of Silver Bell will require the affirmative vote of the holders of not less than two-thirds of the outstanding shares of Silver Bell Common Stock entitled to vote at the meeting.

The members of the Silver Bell Board of Directors have indicated to Silver Bell that they intend to vote all shares of Silver Bell Common Stock owned by them in favor of the Silver Bell Acquisition; as of July 15, 1978, such shares constituted 8.82% of the total number of outstanding shares of Silver Bell.

Even if the Silver Bell Acquisition is approved by the Silver Bell shareholders, its completion will be subject to a number of conditions. See THE SILVER BELL ACQUISITION — Certain Terms of the Silver Bell Agreement — Amendments, Conditions and Termination Provisions at Page 10.

THE SILVER BELL ACQUISITION

Parties:

Union is a California corporation with its principal executive offices at Union Oil Center, Los Angeles, California 90017 (telephone [213] 486-7600). Union is engaged principally in petroleum, chemical and mineral operations. Petroleum operations involve the exploration, production, transportation and sale of crude oil, natural gas and geothermal resources; and the manufacture, transportation and marketing of petroleum products. Chemical operations involve the manufacture, purchase and marketing of chemicals for industrial and agricultural uses. Mineral operations primarily involve the exploration, development, mining, processing and marketing of molybdenum, columbium, rare earths and uranium. Other operations include real estate development and sales. All phases of business in which Union engages are highly competitive. Union's business will continue to be affected not only by such competition, but by general economic developments, governmental regulations, labor conditions and technological and international developments. See BUSINESS AND PROPERTIES OF UNION at Page 27.

Silver Bell is primarily engaged in the acquisition of interests in and to mineral properties and conducts exploration thereon directly or through partners, lessees, purchasers, and optionees for many types of minerals. Silver Bell's principal asset consists of a 35% interest in certain mining claims and the production therefrom (subject to the obligation to pay its proportionate share of the costs of development and production) which are subject to an Operating Agreement with Minerals. Minerals holds the remaining 65% interest in such properties. See BUSINESS AND PROPERTIES OF SILVER BELL — The Sweetwater Project at Page 47 and The Operating Agreement at Page 50.

Board of Directors Recommendation:

The Silver Bell Acquisition has been voted on affirmatively by the Members of the Board of Directors of Silver Bell. At a meeting attended by four of its five members, the Board of Directors of Silver Bell has recommended that the Agreement be approved by the shareholders of Silver Bell. No member of Silver Bell's Board of Directors has expressed disapproval of the Silver Bell acquisition. The Board of Directors of Silver Bell adopted the Plan of Liquidation by unanimous written consent.

The Board of Directors of Union unanimously approved the Acquisition.

The terms of the Silver Bell Agreement are the result of arm's-length negotiations conducted primarily by representatives of Union and Minerals and by Eugene H. Sanders and William K. Somerville, President, Treasurer and Director and Executive Vice President, Secretary and Director of Silver Bell, respectively. Among the factors considered in respect of Silver Bell were the existing reserves and assets and earnings forecasts, particularly in regard to the Sweetwater Project described below, as well as judgments with regard to the prospects of Silver Bell separately and, in respect of Minerals, its prospects as the sole owner of the Sweetwater Project. As sole owner, contingent upon the results of technical and economic feasibility studies, Minerals would seek to utilize developing technology for in situ leaching of uranium and exploitation of the exploratory potential of the Sweetwater Project, if warranted, and to reduce operating costs through simplified operation of the Sweetwater Project and other interests which are subject to the Operating Agreement between Silver Bell and Minerals. See BUSINESS AND PROPERTIES OF SILVER BELL — The Sweetwater Project at Page 47, In Situ Leaching Potential at Page 49 and The Operating Agreement at Page 50.

Silver Bell's Management expects that Silver Bell's shareholders will benefit from the Silver Bell Acquisition for a number of reasons, primarily including the following:

(a) In lieu of Silver Bell shares which are tradeable only in the over-the-counter market, Silver Bell shareholders will receive shares of Union, which are traded on the New York, Midwest and Pacific Stock Exchanges and may be more readily sold or pledged;

(b) Silver Bell has no producing properties at the present time and no significant revenues, recurring cash flow, or earnings from operations. In addition, the mining business is highly competitive and capital intensive. Given its limited financial resources, Management believes the transaction with Union will enable Silver Bell to realize more immediately the potential value of its nonproducing mining properties;

(c) Silver Bell's principal asset is its 35% share of the Sweetwater Project. If for any reason the potential of the Sweetwater Project cannot be realized, the value of Silver Bell shares will be substantially diminished. Management of Silver Bell believes that the potential of the Sweetwater Project can best be realized by Silver Bell shareholders, indirectly, as shareholders of Union, a much more diversified company. See BUSINESS AND PROPERTIES OF SILVER BELL — The Sweetwater Project at Page 47; and

(d) Silver Bell shareholders, who have never received a dividend, may be expected to benefit from Union's policy of payment of dividends on a regular basis, although Union's future share dividend policy is subject to change. See COMPARATIVE PER SHARE DATA at Page 20.

As of September 30, 1978, the present officers and directors of Silver Bell, together with family corporations, their wives, children and trusts of which such persons are trustees or beneficiaries, owned beneficially an aggregate of 667,975 shares of Silver Bell's Common Stock, representing approximately 8.82% of the total number of outstanding shares. Of that number, Mr. Sanders owns a total of 515,766 shares or approximately 6.8% of the total number of outstanding shares. In addition, Consolidated Oil & Gas, Inc. owns an additional 850,342 shares or approximately 11% of the total outstanding. Consolidated Oil & Gas, Inc. has informed Silver Bell that it intends to vote in favor of the Silver Bell Acquisition.

There are no outstanding options or warrants to purchase shares of Silver Bell's Common Stock.

The Board of Directors of Silver Bell recommends a vote FOR the proposal relating to the Silver Bell Acquisition.

Federal Income Tax Consequences:

Silver Bell has obtained an opinion from Messrs. Reardon, Reardon and Reardon, a professional corporation, Silver Bell's tax counsel, to the effect that the transaction will constitute a tax-free reorganization within the meaning of Section 368(a)(1)(C) of the Internal Revenue Code of 1954, as amended, and that no gain or loss will be realized by Silver Bell or its stockholders, except to the extent a stockholder receives cash in lieu of fractional shares or for payment of dissenting shares. The basis of the Union Common Stock to be received by shareholders of Silver Bell will be the same as the basis for the Silver Bell Common Stock surrendered in exchange therefor. Silver Bell did not request a ruling from the Internal Revenue Service relating to the federal income tax consequences of the Silver Bell Acquisition.

Any cash received by Silver Bell shareholders in lieu of fractional shares or in payment for dissenting shares will constitute taxable income. See THE SILVER BELL ACQUISITION — Distribution of Union Common Stock; Fractional Shares at Page 7. Shareholders of Silver Bell should consult their own tax advisors regarding the tax consequences of the acquisition to them.

Federal Antitrust Considerations:

Section 7 of the Clayton Act, one of the Federal antitrust laws, provides in part that no corporation shall acquire the stock or assets of another corporation where, in any line of commerce in any section of the country, the effect of such acquisition may be to lessen competition substantially or to tend to create a monopoly. The Federal Trade Commission (the "FTC") and the Antitrust Division of the United States Department of Justice (the "Division") have the responsibility for examining acquisitions under the Federal antitrust laws and, when believed warranted by either thereof, may bring an action to enjoin consummation of an acquisition or to divest stock or assets if the acquisition has been completed. Because of the uncertainties in interpreting these laws, the possibility of a challenge by these governmental agencies cannot be ruled out.

The Hart-Scott-Rodino Antitrust Improvements Act of 1976 (the "Hart-Scott Act") became effective by its terms on February 27, 1977. Under the provisions of the Hart-Scott Act, certain acquisition transactions may not be consummated unless certain information has been furnished to the Division and the FTC and certain waiting period requirements have been satisfied. Union and Silver Bell have determined that it will not be necessary to file the Notification and Report Form required by the Hart-Scott Act with the Division and the FTC because the value of Silver Bell's assets is not sufficient to require such filing.

Distribution of Union Common Stock; Fractional Shares:

If the Silver Bell Acquisition and proceedings required by Colorado law for the voluntary dissolution of the corporation are completed, the shares of Union Common Stock issued to Silver Bell as consideration for the transfer of the Silver Bell Assets (except to the extent that sales of such shares may be

made to provide cash to pay persons entitled to fractional shares, to pay expenses of Silver Bell and to make payments to any dissenting Silver Bell shareholder) will be distributed to the shareholders of Silver Bell in complete dissolution of Silver Bell according to their respective interests. Distribution of shares and/or cash will be made to shareholders of record on, 1978 and no further transfers of Silver Bell shares will be made subsequent to that date on Silver Bell's transfer records.

Management of Silver Bell estimates that Silver Bell's operating expenses and expenses associated with the Silver Bell Acquisition will be approximately \$200,500 and that Silver Bell will be obligated to pay approximately \$116,000 to satisfy its obligation to pay cash to persons entitled to fractional shares. Assuming that no payments are required to be made to dissenting shareholders and that no unanticipated obligations of Silver Bell arise, Silver Bell will be required to sell approximately 6,330 shares of Union Common Stock (based upon the price per share of Union Common Stock of \$50 on September 6, 1978) to meet such obligations to pay cash. Based upon the foregoing estimates and assumptions, a Silver Bell shareholder will receive .054 shares of Union Common Stock for each Silver Bell Share he holds (18.52 Silver Bell shares will be entitled to approximately one share of Union Common Stock). Such exchange ratio is subject to change if any of the foregoing estimates or assumptions prove incorrect. If substantial increases in Silver Bell's expenses or obligations or a substantial decrease in the price of shares of Union Common Stock occur, such exchange ratio may be decreased.

At the time of distribution, a letter of transmittal will be furnished to shareholders of Silver Bell for use in delivering their stock certificates to the United Bank of Denver, the Exchange Agent. Such letter will contain instructions with respect to the surrender of Silver Bell stock certificates and the distribution of Union stock certificates. No fractional shares or scrip certificates will be issued in connection with the Acquisition. In lieu thereof, any Silver Bell shareholder who otherwise would be entitled to receive a fractional share of Union Common Stock will receive cash equal to the per share market value of Union Common Stock (based on the average of the closing prices of Union Common Stock on the New York Stock Exchange on each of the ten trading days immediately preceding the Time of Closing multiplied by the fraction of a share to which such stockholder otherwise would be entitled). No Silver Bell shareholder shall be entitled to any dividends or other rights with respect to such fractional interests.

Each Silver Bell shareholder will be required to surrender all of the Silver Bell stock certificates registered in his name for cancellation prior to the dissolution of Silver Bell in order to receive the Union Common shares to which he is entitled. Pending distribution to Silver Bell's shareholders or to the Treasurer of the State of Colorado, the Union Common Stock will be held by United Bank of Denver, the Exchange Agent. The Exchange Agent will receive and hold all dividends payable on Union's Common Stock held by it. A Silver Bell shareholder will not be entitled to receive any dividends which may be declared to be payable to Union stockholders of record as of any date after consummation of the Silver Bell Acquisition unless such person has surrendered all Silver Bell stock certificates registered in such person's name prior to the dissolution of Silver Bell. Any such dividends and any cash payable in lieu of fractional share interests will be held by the Exchange Agent, and remitted to a Silver Bell shareholder, without interest, at the time such person's stock certificates are surrendered; provided that such surrender is made prior to the dissolution of Silver Bell. Silver Bell's management anticipates that Silver Bell will be dissolved as soon as is practicable and, in no event, later than one year after the date on which shareholders approve the Plan of Liquidation.

In the event that any shareholder of Silver Bell cannot be located at the time the corporation is dissolved, the shares to which he is entitled will be sold and the proceeds of sale, together with accumulated dividends and any payments due for fractional shares, will be paid to the Treasurer of the State of Colorado to be held by him for 21 years under the provisions of the Colorado escheat statute. During that period, any shareholder who could not previously be found can make claim for his portion of the fund.

Resales of Union Common Stock by Silver Bell Affiliates:

Rule 145 promulgated under the Securities Act of 1933, as amended (the "Securities Act"), limits the right of each "Silver Bell Affiliate" to resell shares of Union Common Stock received upon dissolution of Silver Bell. The term "Silver Bell Affiliate" means each person who may be deemed to be a person who controls, or who is a member of a group which controls, is controlled by, or who is under common control with, Silver Bell at the time the proposed Silver Bell Acquisition is submitted for the vote of the stockholders of Silver Bell. Silver Bell will obtain from each of the persons regarded as a Silver Bell Affiliate prior to the effective time of the Acquisition, as a condition to the distribution of Union Common shares, a letter containing a representation to Union that such person will not make any disposition of any of the shares of Union Common Stock obtained as a result of the Silver Bell Acquisition (presently believed to aggregate approximately 81,989 shares of Union Common Stock) unless: (i) such distribution has been registered under the Securities Act; (ii) the sale of the shares is made in conformity with the volume and other applicable limitations of Rule 145 promulgated under the Securities Act; or (iii) some other exemption from registration of the shares is available. Union has not granted registration rights to any Silver Bell Affiliate. Such letter will be in the form of Exhibit 8 to the Silver Bell Agreement, which Exhibit is attached to this Joint Proxy Statement as Annex V and incorporated herein by reference.

Effective Time of the Silver Bell Acquisition:

The Silver Bell Acquisition will become effective at the Time of Closing, which is defined in the Silver Bell Agreement as December 15, 1978, or at such earlier or later time as may be agreed upon by the parties. See THE SILVER BELL ACQUISITION — Certain Terms of the Silver Bell Agreement — Amendments, Conditions and Termination Provisions as to the rights of the parties to amend the Silver Bell Agreement and to proceed with the Silver Bell Acquisition even though certain of the conditions thereto might not have been satisfied.

It is intended that the officers of Silver Bell will file a statement of intent to dissolve with the Secretary of State of the State of Colorado within 15 days after the effective date of the Silver Bell Acquisition and that Silver Bell will promptly proceed to take the steps required to distribute the Union Common shares and any cash payments to Silver Bell's shareholders and to dissolve the Company. It is estimated that distributions will begin approximately 30 days after the effective time of the Acquisition, although unforeseen circumstances may delay such distributions.

When it is determined that the Silver Bell Acquisition has become effective, press releases to that effect will promptly be distributed to various newspapers and wire services. Should it be necessary to abandon the transaction, press releases to that effect will be similarly disseminated.

Certain Terms of the Silver Bell Agreement:

The following is a summary of some of the terms of the Silver Bell Agreement not discussed elsewhere:

Representations, Warranties and Covenants: Silver Bell has made representations and warranties to Union with respect to, among other things, the information included in its Annual Report on Form 10-K for the fiscal year ended March 31, 1977, title to the Assets, and the absence of litigation or claims of others affecting the Assets. In addition, Union has made representations and warranties to Silver Bell with respect to, among other things, certain of its audited financial statements, certain litigation in which it is involved and the absence since December 31, 1977 of any material adverse change in its financial condition or in the results of its operations or of any other event, condition or state of facts of any character which materially and adversely affects or threatens to affect the results of its operations or business or financial condition. The representations and warranties contained in the Agreement will survive the closing of the transaction. Union will waive any rights it may have

against Silver Bell shareholders to recover damages for breach of any representations, warranties or covenants at the Time of Closing, as hereinabove defined.

Amendments, Conditions and Termination Provisions: The Silver Bell Agreement states that any and all amendments must be in writing and executed by all the parties thereto.

The obligations of Union, Minerals and Silver Bell to cause the Silver Bell Acquisition to be consummated are subject to certain conditions, including without limitation that: (i) no proceedings shall be pending or threatened in which it is sought to restrain or prohibit the completion of the Silver Bell Acquisition and no other material proceeding is pending or threatened; (ii) the holders of at least two-thirds of Silver Bell's outstanding stock shall have approved the Silver Bell Agreement; and (iii) all legal proceedings in connection with the transactions shall be satisfactory to each party's counsel and all required releases, waivers and consents shall have been obtained. The obligations of Silver Bell are subject to certain additional conditions, including without limitation that: (i) all obligations shall have been performed by Union and Minerals, including the listing on the New York, Midwest and Pacific Stock Exchanges of the shares of Union Common Stock to be issued to Silver Bell upon completion of the Acquisition; (ii) Union's representations shall be substantially accurate; (iii) certain legal opinions shall have been delivered; (iv) all consents, approvals and actions required by law (including shareholder approvals) shall have been obtained or taken; and (v) the owners of fewer than an aggregate of five percent (5%) of Silver Bell's shares shall have exercised dissenters' rights.

The obligations of Union and Minerals are also conditioned upon the satisfactory performance or waiver of the following conditions: (i) Silver Bell shall have performed its obligations and covenants; (ii) the Silver Bell Assets shall be in substantially the same condition they were in on April 1, 1978; (iii) Silver Bell shall have delivered such evidence of title to the Silver Bell Assets and other title information as Union may reasonably have requested; (iv) title to the Silver Bell Assets shall be satisfactory to Union; and (v) Union shall have determined to its satisfaction that the representations made in the Silver Bell Agreement are substantially accurate in all material respects.

It is contemplated that these conditions will be fulfilled before the Time of Closing, but the Silver Bell Agreement provides that if any one more of such conditions shall not have been satisfied, the party whose obligation to proceed is made subject to the satisfaction of such condition may, nevertheless, at its election, proceed with the Silver Bell Acquisition. Notwithstanding the right of each party to waive the satisfaction of any condition to its obligation to proceed with the Silver Bell Acquisition, the Silver Bell Acquisition will not be consummated if, at the Time of Closing, the Silver Bell Acquisition will not, in the opinion of Silver Bell's tax counsel, constitute a tax-free reorganization. See THE SILVER BELL ACQUISITION — Federal Income Tax Consequences.

The Silver Bell Agreement may be terminated prior to or after shareholder approval of the Silver Bell Agreement, in the event the transactions contemplated by the Silver Bell Agreement are not consummated on or before December 15, 1978 (unless such date is extended by mutual agreement of the parties), because of the nonoccurrence of any condition.

Rights of Dissenting Shareholders:

Any Silver Bell shareholder has the right to dissent from the proposed transaction and, if the proposed transaction is approved and not abandoned, also has the right to receive cash in lieu of Union Common Shares by complying with the notice requirements and other procedures described under RIGHTS OF DISSENTING SHAREHOLDERS OF SILVER BELL AND MANCOS at Page 17. If the holders of an aggregate of more than 5% of Silver Bell's outstanding stock exercise dissenters' rights, the Silver Bell Acquisition may be abandoned, unless Silver Bell waives this condition to completion of the transaction.

The Silver Bell — Mancos Transaction:

In 1973, Silver Bell and Mancos entered into an Interim Agreement under which Silver Bell agreed to acquire the assets of Mancos for 125,000 shares of Silver Bell's Common Stock. Until February 11, 1977, certain pending litigation, Silver Bell's inadequate capitalization and Mancos' inability to obtain audited financial statements prevented Silver Bell from issuing the necessary shares and completing the transaction.

In 1978, Union, Minerals and Silver Bell agreed that Minerals would acquire substantially all of Silver Bell's assets in exchange for 425,000 shares of Union's Common Stock. Silver Bell requested that Union and Minerals acquire Mancos' assets directly as a means of discharging Silver Bell's obligations under the Interim Agreement. Because Union and Minerals have no interest in acquiring Mancos' assets, they agreed to do so only upon the condition that the number of shares to be issued to Mancos would reduce the number of shares issued to Silver Bell. The 418,095 Union shares to be issued to Silver Bell and the 6,905 shares to be issued to Mancos resulted from this agreement and reflect the number of Union shares which would have been received by Mancos' shareholders if Silver Bell had acquired Mancos pursuant to the Interim Agreement and Union had issued 425,000 shares in exchange for Silver Bell's assets.

A Conditional Release was executed on June 19, 1978 by Silver Bell and Mancos whereby Silver Bell was released from its obligation to acquire Mancos' assets if the Silver Bell and Mancos Acquisitions described in this Joint Proxy Statement are completed. If the Acquisitions are not completed for any reason, the Conditional Release provides that the Interim Agreement between Silver Bell and Mancos will again be effective.

PURPOSE OF THE MANCOS MEETING

The Special Meeting of Shareholders has been called to consider and vote upon a proposal to approve and adopt the Agreement and Plan of Reorganization by and among Mancos, Union Oil Company of California, a California corporation ("Union") and Minerals Exploration Company, a California corporation and a wholly-owned subsidiary of Union, ("Minerals"). Minerals will acquire substantially all of the assets, except for cash on hand, in banks (including certificates of deposit) and on deposit with third parties of Mancos (the "Mancos Assets") in exchange for 6,905 shares of Union's Common Stock, par value \$8 1/4 per share ("Union Common Stock"). Neither Union nor Minerals will assume any obligations of Mancos and Mancos will continue to be liable for the satisfaction of any obligations in existence at the completion of the Mancos Acquisition. Aside from the described obligations and the obligations which will arise in connection with the completion of the sale-of-assets transaction described herein (See EXPENSES on page 16 hereof), Mancos has no known obligations. Mancos will pay all such current obligations prior to or in the course of liquidation.

After the transfer of assets contemplated by the Agreement and Plan of Reorganization (the "Mancos Agreement") is completed, it is contemplated that the shares of Union Common Stock issued to Mancos as consideration for such transfer (except to the extent that sales of such shares may be made to provide cash to pay persons entitled to fractional shares, to pay expenses of Mancos and to make payments to any dissenting Mancos shareholders) will be distributed to the shareholders of Mancos according to their respective interests and that Mancos will then be dissolved pursuant to the Plan of Liquidation, a copy of which is attached hereto as Annex II and applicable law.

The Mancos Agreement is attached hereto as Annex IV. The statements contained in this Joint Proxy Statement with respect to the terms of the Mancos Agreement are subject to the more complete information set forth in such Annex and are qualified in their entirety by reference thereto.

VOTE REQUIRED

Approval of the acquisition by Minerals of the Mancos Assets (the "Mancos Acquisition") and the dissolution of Mancos will require the affirmative vote of the holders of not less than two-thirds of the outstanding shares of Mancos Common Stock entitled to vote at the meeting.

The members of the Mancos Board of Directors have indicated to Mancos that they intend to vote all shares of Mancos Common Stock owned by them in favor of the Mancos Acquisition; as of July 15, 1978, such shares constituted 30.05% of the total number of outstanding shares of Mancos.

Even if the Mancos Acquisition is approved by the Mancos shareholders, its completion will be subject to a number of conditions. See THE MANCOS ACQUISITION — Certain Terms of the Mancos Agreement — Amendments, Conditions and Termination Provisions at Page 15.

THE MANCOS ACQUISITION

Parties:

Union is a California corporation with its principal executive offices at Union Oil Center, Los Angeles, California 90017 (telephone [213] 486-7600). Union is engaged principally in petroleum, chemical and mineral operations. Petroleum operations involve the exploration, production, transportation and sale of crude oil, natural gas and geothermal resources; and the manufacture, transportation and marketing of petroleum products. Chemical operations involve the manufacture, purchase and marketing of chemicals for industrial and agricultural uses. Mineral operations primarily involve the exploration, development, mining, processing and marketing of molybdenum, columbium, rare earths and uranium. Other operations include real estate development and sales. All phases of business in which Union engages are highly competitive. Union's business will continue to be affected not only by such competition, but by general economic developments, governmental regulations, labor conditions and technological and international developments. See BUSINESS AND PROPERTIES OF UNION at Page 27.

Mancos has been inactive since its incorporation in 1970. It owns exploratory mining properties in Montezuma County, Colorado. See BUSINESS AND PROPERTIES OF MANCOS at Page 59.

Board of Directors Recommendation:

The Mancos Acquisition has been voted on affirmatively by each of the Members of the Board of Directors of Mancos. At a meeting attended by two of its three members, the Board of Directors of Mancos has recommended that the Mancos Agreement be approved by the shareholders of Mancos. A third director executed a Waiver of Notice and Consent to the action of the Board of Directors. The Plan of Liquidation was adopted by unanimous written consent of Mancos' Board of Directors. No Mancos Director has expressed disapproval of the Mancos Acquisition.

The Board of Directors of Union unanimously approved the Mancos Acquisition.

The terms of the Mancos Agreement reflect the terms of the Interim Agreement entered into by Mancos and Silver Bell Industries, Inc., a Colorado corporation ("Silver Bell") on September 6, 1973. That agreement provided that at the earliest possible date the parties would enter into an agreement under which Mancos would sell all of its assets to Silver Bell in exchange for 125,000 shares of Silver Bell stock. The Interim Agreement was not concluded due to pending litigation against Silver Bell, Silver Bell's inadequate capitalization and Mancos' inability to obtain audited financial statements.

In 1978, Union, Minerals and Silver Bell agreed that Minerals would acquire substantially all of the assets of Silver Bell for 425,000 shares of Union Common Stock. Silver Bell requested that Union and Minerals acquire Mancos' assets directly as a means of discharging Silver Bell's obligations under the Interim Agreement. Because Union and Minerals have no interest in acquiring Mancos' assets, they agreed to do so only upon the condition that the number of shares to be issued to Mancos would reduce the number of shares issued to Silver Bell. The 418,095 Union shares to be issued to Silver Bell and the 6,905 shares to be issued to Mancos resulted from this agreement and reflect the number of Union shares which would have been received by Mancos' shareholders if Silver Bell had acquired Mancos pursuant to the Interim Agreement and Union had issued 425,000 shares in exchange for Silver Bell's assets.

A Conditional Release was executed on June 19, 1978 by Silver Bell and Mancos whereby Silver Bell was released from its obligation to acquire Mancos' assets if the Silver Bell and Mancos Acquisitions described in this Joint Proxy Statement are completed. If the Acquisitions are not completed for any reason, the Conditional Release provides that the Interim Agreement between Silver Bell and Mancos will again be effective.

Mancos' Management anticipates that Mancos' shareholders will benefit from the Mancos Acquisition for the following reasons:

(a) In lieu of Mancos shares which are not readily tradeable, Mancos shareholders will receive shares of Union, which are traded on the New York, Midwest and Pacific Stock Exchanges and may be more easily sold or pledged;

(b) Mancos has no producing properties at the present time and no significant revenues, recurring cash flow, or earnings from operations. In addition, the mining business is highly competitive and capital intensive. Given its limited financial resources, Management believes the transaction with Union will enable Mancos to realize some value from its nonproducing mining properties;

(c) Mancos shareholders, who have never received a dividend, may be expected to benefit from Union's policy of payment of dividends on a regular basis, although Union's future share dividend policy is subject to change. See COMPARATIVE PER SHARE DATA at Page 20.

As of July 15, 1978, the present officers and directors of Mancos, together with their wives, children and trusts of which such persons are trustees or beneficiaries, owned beneficially an aggregate of 530,500 shares of Mancos' Common Stock, representing 30.05% of the total number of outstanding shares. Of that number, Earl J. Brubaker owns a total of 510,500 shares or 28.92% of the total number of outstanding shares.

There are no outstanding options or warrants to purchase shares of Mancos' Common Stock.

The Board of Directors of Mancos recommends a vote FOR the proposal relating to the Mancos Acquisition.

Federal Income Tax Consequences:

Mancos has obtained an opinion from Messrs. Reardon, Reardon and Reardon, a professional corporation, tax counsel, to the effect that the transaction will constitute a tax-free reorganization within the meaning of Section 368(a)(1)(C) of the Internal Revenue Code of 1954, as amended, and that no gain or loss will be realized by Mancos or its stockholders, except to the extent a stockholder receives cash in lieu of fractional shares or for payment of dissenting shares. The basis of the Union Common Stock to be received by shareholders of Mancos will be the same as the basis for the Mancos Common Stock surrendered in exchange therefor. Mancos did not request a ruling from the Internal Revenue Service relating to the federal income tax consequences of the Mancos Acquisition.

Any cash received by Mancos shareholders in lieu of fractional shares or in payment of dissenting shares will constitute taxable income. See THE MANCOS ACQUISITION — Distribution of Union Common Stock; Fractional Shares below. Shareholders of Mancos should consult their own tax advisors regarding the tax consequences of the acquisition to them.

Distribution of Union Common Stock; Fractional Shares:

If the Mancos Acquisition and proceedings required by Colorado law for the voluntary dissolution of the corporation are completed, the shares of Union Common Stock issued to Mancos as consideration for the transfer of the Mancos Assets (except to the extent that sales of such shares may be made to provide cash to pay persons entitled to fractional shares, to pay expenses of Mancos and to make payments to any dissenting Mancos shareholder) will be distributed to the shareholders of Mancos in complete dissolution of Mancos according to their respective interests. Distribution of shares and/or

cash will be made to shareholders of record on 1978 and no further transfers of Mancos shares will be made subsequent to that date on Mancos' transfer records.

Management of Mancos estimates that cash in the amount of approximately \$30,000 will be available to Mancos during the period prior to completion of the Mancos Acquisition, that Mancos' expenses will be \$30,000 and that Mancos will be obligated to pay approximately \$7,500 to satisfy its obligation to pay cash to persons entitled to fractional shares. Assuming that no payments are required to be made to dissenting shareholders and that no unanticipated obligations of Mancos arise, Mancos will be required to sell approximately 150 shares of Union Common Stock (based upon the price per share of Union Common Stock of \$50 on September 6, 1978) to meet such obligations to pay cash. Based upon the foregoing estimates and assumptions, a Mancos shareholder will receive approximately .0038 shares of Union Common Stock for each Mancos Common share he holds (263.16 Mancos shares will be entitled to approximately one share of Union Common Stock). Such exchange ratio is subject to change if any of the foregoing estimates or assumptions prove incorrect. If substantial increases in Mancos' expenses or obligations or a substantial decrease in the price of shares of Union Common Stock occur, such exchange ratio may decrease.

At the time of distribution, a letter of transmittal will be furnished to shareholders of Mancos for use in delivering their stock certificates to Mancos. Such letter will contain instructions with respect to the surrender of Mancos' stock certificates and the distribution of Union stock certificates. No fractional shares or scrip certificates will be issued in connection with the Mancos Acquisition. In lieu thereof, any Mancos shareholder who otherwise would be entitled to receive a fractional share of Union Common Stock will receive cash equal to the per share market value of Union Common Stock (based on the average of the closing prices of Union Common Stock on the New York Stock Exchange on each of the ten trading days immediately preceding the Time of Closing multiplied by the fraction of a share to which such stockholder otherwise would be entitled). No Mancos shareholder shall be entitled to any dividends or other rights with respect to such fractional interests.

Each Mancos shareholder will be required to surrender all of the Mancos stock certificates registered in his name for cancellation prior to the dissolution of Mancos in order to receive the Union Common shares to which he is entitled. Pending distribution to Mancos' shareholders or to the Treasurer of the State of Colorado, the Union Common Stock will be held by Mancos. Mancos will receive and hold all dividends payable on Union's Common Stock held by it. A Mancos shareholder will not be entitled to receive any dividends which may be declared to be payable to Union stockholders of record as of any date after consummation of the Mancos Acquisition unless such person has surrendered all Mancos stock certificates registered in such person's name prior to the dissolution of Mancos. Any such dividends and any cash payable in lieu of fractional share interests will be held by Mancos, and remitted to a Mancos shareholder, without interest, at the time such person's stock certificates are surrendered; provided that such surrender is made prior to the dissolution of Mancos. Mancos' management anticipates that Mancos will be dissolved as soon as is practicable and, in no event, later than one year after the date on which shareholders approve the Plan of Liquidation.

In the event that any Mancos shareholder cannot be located at the time the corporation is dissolved, the shares to which he is entitled will be sold and the proceeds of sale, together with accumulated dividends and any payments due for fractional shares, will be paid to the Treasurer of the State of Colorado to be held by him for 21 years under the provisions of the Colorado escheat statute. During that period, any shareholder who could not previously be found can make claim for his portion of the fund.

Resales of Union Common Stock by Mancos Affiliates:

Rule 145 promulgated under the Securities Act of 1933, as amended (the "Securities Act"), limits the right of each "Mancos Affiliate" to resell shares of Union Common Stock received upon liquidation of Mancos. The term "Mancos Affiliate" means each person who may be deemed to

be a person who controls, or who is a member of a group which controls, is controlled by, or who is under common control with, Mancos at the time the proposed Mancos Acquisition is submitted for the vote of the stockholders of Mancos. Mancos will obtain from each of the persons regarded as a Mancos Affiliate prior to the effective time of the Mancos Acquisition, as a condition to the distribution of Union Common Shares, a letter containing a representation to Union that such person will not make any disposition of any of the shares of Union Common Stock obtained as a result of the Mancos Acquisition (presently believed to aggregate approximately 2,067 shares of Union Common Stock) unless: (i) such distribution has been registered under the Securities Act; (ii) the sale of the shares is made in conformity with the volume and other applicable limitations of Rule 145 promulgated under the Securities Act; or (iii) some other exemption from registration of the shares is available. Such letter will be in the form of Exhibit 8 to the Mancos Agreement, which Exhibit is attached to this Joint Proxy Statement as Annex VI and incorporated herein by reference. Union has not granted registration rights to any Mancos Affiliate.

Effective Time of the Acquisition:

The Mancos Acquisition will become effective at the Time of Closing, which is defined in the Mancos Agreement as December 15, 1978, or at such earlier or later time as may be agreed upon by the parties. See THE MANCOS ACQUISITION — Certain Terms of the Mancos Agreement — Amendments, Conditions and Termination Provisions as to the rights of the parties to amend the Mancos Agreement and to proceed with the Mancos Acquisition even though certain of the conditions thereto might not have been satisfied.

It is estimated that the officers of Mancos will file a statement of intent to dissolve with the Secretary of State of the State of Colorado within 15 days after the effective date of the Mancos Acquisition and that Mancos will promptly proceed to take the steps required to distribute the Union Common Shares and any cash payments to Mancos' shareholders and to dissolve Mancos. It is estimated that distributions will begin approximately 30 days after the effective time of the Mancos Acquisition, although unforeseen circumstances may delay such distributions.

When it is determined that the Mancos Acquisition has become effective, press releases to that effect will promptly be distributed to various newspapers and wire services. Should it be necessary to abandon the transaction, press releases to that effect will be similarly disseminated.

Certain Terms of the Mancos Agreement:

The following is a summary of some of the terms of the Mancos Agreement not discussed elsewhere:

Representations, Warranties and Covenants: Mancos has made representations and warranties to Union with respect to, among other things, the information included in its Financial Statements for the fiscal year ended December 31, 1977, title to the Mancos Assets, and the absence of litigation or claims of others affecting the Mancos Assets (except for the agreement with Silver Bell described in this Proxy Statement). In addition, Union has made representations and warranties to Mancos with respect to, among other things, certain of its audited financial statements, certain litigation in which it is involved and the absence since December 31, 1977 of any material adverse change in its financial condition or in the results of its operations or of any other event, condition or state of facts of any character which materially and adversely affects or threatens to affect the results of its operations or business or financial condition. The representations and warranties contained in the Mancos Agreement will survive the closing of the transaction. Union will waive any rights it may have against Mancos shareholders to recover damages for breach of any representations, warranties or covenants at the Time of Closing, as hereinabove defined.

Amendments, Conditions and Termination Provisions: The Mancos Agreement states that any and all amendments must be in writing and executed by all the parties thereto.

The obligations of Union, Minerals and Mancos to cause the Mancos Acquisition to be consummated are subject to certain conditions, including without limitation that: (i) no proceedings shall be pending or threatened in which it is sought to restrain or prohibit the completion of the Mancos Acquisition and no other material proceeding is pending or threatened; (ii) the holders of at least two-thirds of Mancos' outstanding stock shall have approved the Mancos Agreement; (iii) all legal proceedings in connection with the transactions shall be satisfactory to each party's counsel and all required releases, waivers and consents shall have been obtained; and (iv) the completion of the Agreement and Plan of Reorganization between Silver Bell, Union and Minerals dated May 15, 1978.

The obligations of Mancos are subject to certain additional conditions, including without limitation that: (i) all obligations shall have been performed by Union and Minerals, including the listing on the New York, Midwest and Pacific Stock Exchanges of the shares of Union Common Stock to be issued to Mancos upon completion of the Mancos Acquisition; (ii) Union's representations shall be substantially accurate; (iii) certain legal opinions shall have been delivered; (iv) all consents, approvals and actions required by law (including shareholder approvals) shall have been obtained or taken; and (v) the owners of fewer than an aggregate of twenty percent (20%) of Mancos' shares shall have exercised dissenters' rights.

The obligations of Union and Minerals are also conditioned upon the satisfactory performance or waiver of the following conditions: (i) Mancos shall have performed its obligations and covenants; (ii) the Mancos Assets shall be in substantially the same condition they were in on December 31, 1977; (iii) Mancos shall have delivered such evidence of title to the Mancos Assets and other title information as Union may reasonably have requested; (iv) title to the Mancos Assets shall be satisfactory to Union; and (v) Union shall have determined to its satisfaction that the representations made in the Mancos Agreement are substantially accurate in all material respects.

It is contemplated that these conditions will be fulfilled before the Time of Closing, but the Mancos Agreement provides that if any one or more of such conditions shall not have been satisfied, the party whose obligation to proceed is made subject to the satisfaction of such condition may, nevertheless, at its election, proceed with the Mancos Acquisition. Notwithstanding the right of each party to waive the satisfaction of any condition to its obligation to proceed with the Mancos Acquisition, the Mancos Acquisition will not be consummated if, at the Time of Closing, the Mancos Acquisition will not, in the opinion of tax counsel, constitute a tax-free reorganization. See THE MANCOS ACQUISITION — Federal Income Tax Consequences.

The Mancos Agreement may be terminated prior to or after shareholder approval of the Mancos Agreement, in the event the transactions contemplated by the Agreement are not consummated on or before December 15, 1978 (unless such date is extended by mutual agreement of the parties), because of the nonoccurrence of any condition.

Rights of Dissenting Shareholders:

Any Mancos shareholder has the right to dissent from the proposed transaction and, if the proposed transaction is approved and not abandoned, also has the right to receive cash in lieu of Union Common Shares by complying with the notice requirements and other procedures described under RIGHTS OF DISSENTING SHAREHOLDERS OF SILVER BELL AND MANCOS at Page 17. If the holders of an aggregate of more than 20% of Mancos' outstanding stock exercise dissenters' rights, the Mancos Acquisition may be abandoned, unless Mancos waives this condition to completion of the transaction.

EXPENSES

The Silver Bell Agreement provides that Silver Bell shall pay all costs of obtaining any required consents and waivers; costs of curing title to the Silver Bell Assets; its own counsel and accounting fees; and costs of securing shareholder approval of the Agreement. Union shall pay costs of preparing

the Registration Statement; its own counsel and accounting fees, including those relating to title examination; and recording fees. Printing costs will be shared equally with Union. It is estimated that Silver Bell's expenses will aggregate from \$210,500 to \$225,500, consisting of \$37,500 for exchange agent fees, salaries of officers and employees and office overhead prior to closing, \$100,000 for legal and accounting fees, between \$25,000 and \$50,000 for printing, and \$48,000 for miscellaneous costs. Expenses of Union are estimated to aggregate \$71,750, consisting of \$10,000 for outside accounting, \$50,000 for printing, \$4,250 for the Securities and Exchange Commission filing fee, and \$7,500 for miscellaneous costs.

The Mancos Agreement provides that Mancos shall pay all costs of obtaining any required consents and waivers; costs of curing title to the Mancos Assets; its own counsel and accounting fees; and costs of securing shareholder approval of the Mancos Agreement. Mancos' expenses are estimated to aggregate \$30,000, consisting of \$25,000 for legal fees and \$5,000 for miscellaneous costs.

PURCHASES OF UNION COMMON STOCK

Union has purchased 425,000 shares of its Common Stock, pursuant to an exemption from the operation of Securities and Exchange Commission Rule 10b-6 and in conformity with the conditions set forth in the exemption letter obtained by Union. Such purchases commenced on or about April 25, 1978 and the last of such purchases was made on May 26, 1978. The shares were purchased for use by Union in acquiring the Assets of Silver Bell and Mancos. The closing price per share of Union's Common Stock as reported by the Wall Street Journal NYSE-Composite Transactions on April 24, 1978, the day prior to the day on which purchases commenced, was \$49 $\frac{3}{4}$, and was \$49 $\frac{3}{4}$ on May 26, 1978, the day on which purchases ceased.

RIGHTS OF DISSENTING SHAREHOLDERS OF SILVER BELL AND MANCOS

Any Silver Bell or Mancos shareholder has the right to dissent from the proposed transaction and, if the proposed transaction is approved and not abandoned, also has the right, upon compliance with the procedures set forth in Section 7-4-123 of the Colorado Corporation Code to receive payment in cash for the fair market value of his shares as of, 1978, for Silver Bell shareholders or as of, 1978 for Mancos shareholders, the day prior to the date on which the respective Special Meetings of Shareholders are to be held, exclusive of any element of value arising from the expectation or accomplishment of the respective transactions. No such right exists unless demands for such payments are filed, as described below. A shareholder may dissent with respect to all or any part of his shares.

If the holders of more than an aggregate of five percent (5%) of Silver Bell's outstanding stock exercise dissenters' rights, the Silver Bell Acquisition may be abandoned, unless Silver Bell waives this condition to completion of the transaction. See THE SILVER BELL ACQUISITION — Certain Terms of the Silver Bell Agreement — Amendments, Conditions and Termination Provisions at Page 10.

If the holders of more than an aggregate of twenty percent (20%) of Mancos' outstanding stock exercise dissenters' rights, the Mancos Acquisition may be abandoned, unless Mancos waives this condition to completion of the transaction. See THE MANCOS ACQUISITION — Certain Terms of the Mancos Agreement — Amendments, Conditions and Termination Provisions at Page 15.

Any shareholder electing to exercise his right to dissent from the transaction ("Dissenting Shareholder") and have the corporation purchase his shares for cash must satisfy the following requirements: (i) he must file with the corporation a written objection to the sale of substantially all of the corporation's assets or to the dissolution of the corporation prior to the Special Meeting of Shareholders at which shareholder approval is sought; (ii) he must not vote in favor thereof; (iii) he must make written demand on the corporation for the payment to him of the fair value of his shares, which demand must be

received within ten (10) days after the vote was taken; and (iv) within twenty (20) days after demanding payment for his shares, he must submit the certificates representing his shares to the corporation for notation thereon that such demand has been made. Any dissenting shareholder failing to make demand within the ten-day period shall be bound by the terms of the sale.

Within thirty (30) days after the Time of Closing, the corporation must give notice thereof to each dissenting shareholder who has made demand as provided above for the payment of the fair value of his shares. At such time, the corporation shall make a written offer to each dissenting shareholder to pay for such shares at a specified price deemed by the corporation to be the fair value thereof.

If, within fifty (50) days after the Time of Closing, the value of such shares is agreed upon between the dissenting shareholder and the corporation, payment therefor shall be made within ninety (90) days after such date upon the surrender of his certificate representing such shares. Upon payment of the agreed value, the dissenting shareholder shall cease to have any interest in such shares or in the corporation.

If, within such period of fifty days, the shareholder and the corporation do not so agree, then the corporation, within thirty days after receipt of written demand from any dissenting shareholder given within sixty days after the Time of Closing shall file, or at its election at any time within such period of sixty days, may file, a petition in the district court for the county or city and county where the registered office of the corporation is located requesting that the fair value of such shares be determined. If the corporation fails to institute such proceedings, any dissenting shareholder may do so in the name of the corporation. All dissenting shareholders, except those who have previously agreed with the corporation as to the fair value of their shares, wherever residing, shall be made parties to the proceeding. (If the corporation fails to institute such proceedings and if a dissenting shareholder or shareholders do not bring proceedings in the name of the corporation, dissenting shareholders will be entitled to receive the amount offered by the corporation).

The right of a dissenting shareholder to be paid the fair value of his shares as provided in Section 7-4-123 of the Colorado Corporation Code shall cease if and when the corporation abandons the sale, or the shareholders revoke the authority to make such sale.

Persons who are beneficial owners of Silver Bell or Mancos Common Stock but whose shares are held of record by another person, such as a broker, bank or nominee, should instruct the recordholder to follow the procedure outlined above if such persons wish to dissent with respect to their shares.

The foregoing is a summary of the rights of Dissenting Shareholders, does not purport to be a complete statement thereof, and is qualified in its entirety by reference to the applicable statutory provisions of the Colorado Corporation Code which are attached to this Joint Proxy Statement as Annex VII.

The receipt of cash for Dissenting Shares by shareholders may give rise to taxable income. Shareholders are urged to consult their personal tax advisors to determine the tax consequences of the exercise of dissenters' rights by them.

SOME DIFFERENCES BETWEEN COLORADO AND CALIFORNIA CORPORATION LAWS

The rights of shareholders of Silver Bell and Mancos, Colorado corporations, are governed primarily by the provisions of the Colorado Corporation Code. Union is a California corporation and the rights of its shareholders are governed primarily by the provisions of the California General Corporation Law. The provisions of the Colorado and California laws differ in many respects; briefly summarized below are certain of the principal differences affecting the rights of shareholders of Silver Bell, Mancos and Union. The summary does not purport to be a complete statement of the differences between the California General Corporation Law and the Colorado Corporation Code and related laws affecting shareholders' rights and is qualified in its entirety by reference to the provisions thereof:

a. Under California law, shareholders have the right of cumulative voting in elections for directors, pursuant to which each shareholder has the right, upon giving specified notice, to give one candidate a number of votes equal to the number of directors to be elected multiplied by the number of votes to which his shares are entitled, or to distribute his votes on the same principle among as many candidates as he thinks fit. Under Colorado law, cumulative voting in the election of directors is not mandated by statute, and the Silver Bell and Mancos Articles of Incorporation do not presently provide for cumulative voting.

b. Under California law, the number of directors may be changed only by the vote of shareholders holding a majority of the shares entitled to vote, unless the Articles of Incorporation provide (as do those of Union at the present time) for an indeterminate number of directors with the exact number to be fixed by approval of the board or the shareholders. The Union Articles of Incorporation provide for a minimum of twelve and a maximum of fifteen directors. In addition, under California law the number of directors may not be reduced to below five without the vote of the holders of 83 1/3 % of the shares.

c. Under California law, special meetings of the shareholders may be called by the holders of not less than 10% of the voting power. Under Colorado law, special meetings of shareholders may be called only by the president, the board of directors, the holders of not less than one-tenth of all the shares entitled to vote at the meeting, or by such other officers or persons as may be provided by the articles of incorporation or the bylaws. The bylaws of Silver Bell presently provide for the calling of such a meeting by the aforesaid persons. The bylaws of Mancos presently provide for the calling of such a meeting by the president, the board of directors or the holders of one-fourth of all the shares entitled to vote at the meeting.

COMPARATIVE PER SHARE DATA
(Unaudited)

Earnings Per Share of Common Stock:

	Year Ended December 31,					Six Months Ended June 30,	
	1973	1974	1975	1976	1977	1977	1978
Union:							
Historical:							
Assuming no dilution (a)	\$5.01	\$8.26	\$6.30	\$7.17	\$7.86	\$3.73	\$3.82
Assuming full dilution (a)	\$4.10	\$6.64	\$5.32	\$6.36	\$7.39	\$3.49	\$3.73
Mancos:							
Historical (b)			\$ (.0003)	\$.0009	\$ (.00035)		
Pro Forma (c)			\$.0202	\$.0242	\$.0281		

	Year Ended March 31,		
	1976	1977	1978
Silver Bell:			
Historical (d)	\$ (0.04)	\$ (0.05)	\$ (0.04)
Pro Forma (e)	\$ 0.29	\$ 0.34	\$ 0.40

Book Value Per Share of Common Stock:

	As of December 31, 1977	As of June 30, 1978
Union:		
Historical (f)	\$53.69	\$56.41
Mancos:		
Historical (g)	\$ 0.13848	
Pro Forma (c)	\$ 0.20402	
	As of March 31, 1978	
Silver Bell:		
Historical (h)	\$ 0.60	
Pro Forma (e)	\$ 2.90	

- (a) Earnings per share assuming no dilution are based on weighted average Common Shares outstanding during each period and earnings after deducting preferred dividend requirements. Earnings per Common Share assuming full dilution assumes the weighted average outstanding preferred shares, convertible debentures and stock options were converted into Common Shares.
- (b) Income (loss) per share was computed using the weighted average number of shares outstanding during the year.
- (c) Reflects exchange ratio of .0038 share of Union Common Stock for each share of Mancos Common Stock.
- (d) Net loss per share is based on weighted average common shares outstanding during each period.
- (e) Reflects exchange ratio of .054 share of Union Common Stock for each share of Silver Bell Common Stock using Union's fully diluted earnings per share for the years ended December 31, 1975, 1976 and 1977 and Union's book value per Common Share at December 31, 1977.
- (f) Union historical book value per share is based on the shareowners' equity of Union and the assumed conversion of any outstanding preferred shares, all convertible debentures and stock options into common shares at the balance sheet data.
- (g) Book value per share is based upon the stockholders' equity at the end of the year divided by the shares outstanding at year-end. No options to purchase were ever granted.
- (h) Book value per share is based upon the shareholders' equity at the end of the fiscal year divided by the sum of Common Stock outstanding plus options outstanding at the end of the fiscal year.

COMPARATIVE MARKET PRICES OF UNION AND SILVER BELL COMMON STOCK

The following table sets forth the reported high and low sale prices of Union Common Stock and the high and low bid and asked prices of Silver Bell Common Stock, as reported by the Wall Street Journal and NASD Quotations. Prior to January 26, 1976, prices reported by the Wall Street Journal were those on the New York Stock Exchange and since that date prices quoted were a composite of transactions on such Exchange, on regional exchanges and in certain other transactions.

	Union Sales Prices		Silver Bell Bid Prices		Silver Bell Asked Prices	
	High	Low	High	Low	High	Low
1973.....	\$50¾	\$32¾				
1974.....	56¾	27¼				
1975.....	50%	32½	\$2.38	\$0.88	\$2.75	\$1.13
1976						
First Quarter.....	47¾	40%	2.38	1.50	2.63	1.75
Second Quarter.....	55½	42¾	2.25	1.38	2.50	1.63
Third Quarter.....	55½	49¾	1.63	1.13	1.88	1.38
Fourth Quarter.....	59%	50%	2.38	1.38	2.75	1.63
1977						
First Quarter.....	59¾	53%	2.00	1.63	2.35	1.88
Second Quarter.....	56	50%	2.00	1.50	2.25	1.75
Third Quarter.....	58½	49%	1.88	1.38	2.13	1.63
Fourth Quarter.....	56¼	50%	2.00	1.63	2.25	1.88
1978						
First Quarter.....	52¾	45¾	2.13	1.63	2.38	1.88
Second Quarter.....	53¾	46¾	2.25	2.00	2.50	2.25
Third Quarter.....	56¾	48¾	2.38	2.00	2.63	2.25

On March 29, 1978, the day preceding the public announcement of the Silver Bell Acquisition, the high and low sale prices of Union Common Stock as reported by the *Wall Street Journal* were \$49¾ and \$49¼, respectively. The bid and asked prices for shares of Silver Bell's Common Stock were \$2 and \$2.25, respectively on said date. The Mancos Acquisition was not publicly announced.

Union's Common shares are listed on the New York, Midwest and Pacific Stock Exchanges. Silver Bell's Common shares are traded in the over-the-counter market. The shares of Mancos are not publicly traded.

The bid and asked prices for shares of Silver Bell Common Stock disclosed above do not represent actual transactions.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES
CAPITALIZATION

The following table sets forth the capitalization of Union at December 31, 1977 and June 30, 1978.

	December 31, 1977	June 30, 1978 (Unaudited)
	Thousands of Dollars	
Short-term debt		
Short-term notes payable.....	\$ 41,917	\$ 16,630
Current portion of long-term debt.....	14,921	35,251
Total short-term debt.....	56,838	51,881
Long-term debt.....	1,024,513	1,034,149
Minority interests.....	16,826	16,569
Shareowners' equity:		
Preferred Shares, \$2.50 cumulative convertible without par value.....	24,046	—
Common Shares, par value \$8 1/3.....	352,503	366,150
Capital in excess of par or stated value of shares issued.....	193,940	189,575
Retained earnings.....	1,866,964	1,934,175
Total shareowners' equity.....	2,437,453	2,489,900
Total capitalization.....	<u>\$3,535,630</u>	<u>\$3,592,499</u>

CAPITALIZATION OF SILVER BELL AND MANCOS

The following table shows the capitalization of Silver Bell and Mancos, each at March 31, 1978:

	<u>Silver Bell</u>	<u>Mancos</u>
Debt:		
Notes Payable.....	\$ 50,000(1) 12,070(1)	None(2)
Capital Stock:		
Silver Bell		
Authorized 7,700,000		
\$0.25 par value common.....	7,568,388	
Mancos		
Authorized 5,000,000		
\$0.01 par value common.....		1,765,219

- (1) Silver Bell owes \$50,000 to Mancos under and pursuant to a promissory note for money borrowed on September 6, 1973, which bears interest at 7% per annum. The maturity date of the promissory note has been extended to May 31, 1979. Union has agreed to assume the obligation to repay the promissory note to Mancos.

Silver Bell issued a promissory note in the principal amount of \$12,070 to Minerals. The promissory note bears interest at the rate of 7% per annum and matures on April 30, 1979. The note will be cancelled if the Silver Bell Acquisition is completed.

- (2) Mancos will assign the promissory note referred to in (1) above to Minerals as part of its assets. The promissory note will then be cancelled.

PRO FORMA FINANCIAL DATA

Pro forma data has not been furnished since the Silver Bell and Mancos Acquisitions will not result in material changes in Union's capitalization, earnings or assets. Since Union purchased on the open market all of the Union Common shares to be exchanged for the Silver Bell and Mancos Assets, neither the historical book value per share nor the historical earnings per share of Union will change as a result of the transactions.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

STATEMENT OF CONSOLIDATED EARNINGS

The following statement of consolidated earnings of Union Oil Company of California and its consolidated subsidiaries for the five years ended December 31, 1977 has been examined by Coopers & Lybrand, independent certified public accountants, whose report with respect thereto appears elsewhere herein. In the opinion of Union, the unaudited data for the periods ended June 30, 1977 and June 30, 1978 reflect all adjustments (consisting only of normal recurring accruals) required for a fair presentation of the results of operations for the respective periods. This statement should be read in conjunction with the other financial statements and notes thereto appearing elsewhere herein.

	Year Ended December 31,					Six Months Ended June 30, (Unaudited)	
	1973 Restated	1974 Restated	1975 Restated	1976 Restated	1977	1977 Restated	1978
	Thousands of Dollars						
Revenues							
Sales (including excise taxes)*	\$2,860,874	\$4,726,640	\$5,353,095	\$5,632,399	\$5,842,895	\$2,914,138	\$2,945,776
Other operating revenues	110,275	119,068	143,325	152,325	191,184	80,468	88,039
Interest, dividends and miscellaneous income (Note 4)	31,061	4,358	42,442	42,684	31,258	18,726	18,836
Equity in earnings of affiliated companies	16,180	14,581	13,041	28,764	25,160	13,520	12,159
Gains on sales of assets	7,345	4,129	11,307	15,672	8,678	3,294	14,233
Total revenues	<u>3,025,735</u>	<u>4,868,776</u>	<u>5,563,210</u>	<u>5,871,844</u>	<u>6,099,175</u>	<u>3,030,146</u>	<u>3,079,043</u>
Costs and other deductions							
Cost of products sold and operating expense (Notes 7, 15 and 20)	1,761,777	3,099,350	3,758,001	3,962,713	4,152,001	2,062,876	2,096,835
Selling, administrative and general expense (Note 20)	233,561	267,229	239,717	262,832	268,333	121,653	139,161
Depletion and depreciation	175,957	215,267	234,779	279,238	308,155	147,633	125,121
Amortization of nonproductive acreage costs	54,100	149,100	108,600	100,300	51,100	37,000	24,600
Provision for dry hole losses	53,000	89,700	78,100	104,700	96,600	55,700	51,500
Excise, property and other operating taxes (Note 20)*	436,516	503,826	603,525	522,648	536,827	268,862	267,615
Interest expense	43,780	45,143	60,255	67,940	78,111	36,651	39,760
Earnings applicable to minority interests	1,963	1,932	2,162	3,689	2,109	925	1,311
Total costs and other deductions	<u>2,760,654</u>	<u>4,371,547</u>	<u>5,085,139</u>	<u>5,304,060</u>	<u>5,493,236</u>	<u>2,731,300</u>	<u>2,745,903</u>
Earnings before taxes on income (Notes 3 and 4)	265,081	497,229	478,071	567,784	605,939	298,846	333,140
Federal and other taxes on income (Note 5)	83,000	201,800	240,800	282,000	271,700	141,200	167,200
Net earnings	<u>182,081</u>	<u>295,429</u>	<u>237,271</u>	<u>285,784</u>	<u>334,239</u>	<u>157,646</u>	<u>165,940</u>
Dividends on Preferred Shares	24,406	20,616	17,962	10,482	6,026	3,249	186
Net earnings applicable to Common Shares	<u>\$ 157,675</u>	<u>\$ 274,813</u>	<u>\$ 219,309</u>	<u>\$ 275,302</u>	<u>\$ 328,213</u>	<u>\$ 154,397</u>	<u>\$ 165,754</u>
Net earnings per Common Share (Note 6)							
Assuming no dilution	<u>\$5.01</u>	<u>\$8.26</u>	<u>\$6.30</u>	<u>\$7.17</u>	<u>\$7.86</u>	<u>\$3.73</u>	<u>\$3.82</u>
Assuming full dilution	<u>\$4.10</u>	<u>\$6.64</u>	<u>\$5.32</u>	<u>\$6.36</u>	<u>\$7.39</u>	<u>\$3.49</u>	<u>\$3.73</u>
Cash dividends declared per Common Share	<u>\$1.65</u>	<u>\$1.98</u>	<u>\$1.98</u>	<u>\$2.10</u>	<u>\$2.20</u>	<u>\$1.10</u>	<u>\$1.15</u>
Common Shares (thousands)							
Weighted average number outstanding	31,444	33,282	34,811	38,374	41,766	41,347	43,447
Fully diluted	44,414	44,531	44,605	44,989	45,250	45,222	44,461
* Includes excise taxes of	\$ 361,334	\$ 351,298	\$ 350,909	\$ 352,639	\$ 365,559	\$ 180,629	\$ 184,129

Numbered note references are to Notes to Consolidated Financial Statements of Union.

UNION MANAGEMENT'S DISCUSSION AND ANALYSIS OF STATEMENT OF CONSOLIDATED EARNINGS

Six Months 1978 Versus Six Months 1977

Six months 1978 earnings were \$8.3 million (5.3%) higher than earnings for the first six months of 1977. This earnings increase was due to several factors. Refining and marketing operations were more profitable as a result of better refinery yields and improved marketing margins. Net earnings also benefited from lower charges for amortization of nonproductive acreage costs (primarily due to successful exploration in the Gulf of Mexico), and increased chemical earnings (primarily due to improved petrochemical sales realizations). Partially offsetting these gains were lower investment tax credits and lower domestic oil and gas production.

Lower depletion and depreciation expense reflects lower charges related to Indonesian production operations (no impact on earnings) as a result of revised production sharing agreements which stretch out the period over which exploration and production costs may be recovered.

In the second quarter of 1978, MolyCorp, Inc., a wholly-owned subsidiary of Union, sold its 49% interest in Kawecki Berylco Industries, Inc. and Union sold its 100% interest in Sully-Miller Contracting Company. There was no material impact on net earnings as a result of these sales.

1977 Versus 1976

Union's net earnings for 1977 were \$334.2 million, an increase of \$48.4 million over 1976 earnings of \$285.8 million. There were no extraordinary items in either period.

Earnings improvement in 1977 was the result of four main factors:

- ☐ lower dry hole and nonproductive acreage charges primarily due to successful domestic exploration
- ☐ new natural gas production from recently found and developed fields coming on stream
- ☐ higher foreign crude oil production from successful development and production operations
- ☐ higher investment tax credits related to domestic capital expenditures

These positive factors were partially offset by declines in domestic production of crude oil and old natural gas and higher costs which were not fully recovered in product sales. Agricultural chemical earnings were also down, reflecting demand decreases due to the drought in the western states and start up costs of new plants at Kenai, Alaska.

Total revenues in 1977 (excluding excise taxes collected for state and federal governments) were \$5.7 billion — up \$200 million, or approximately four percent from 1976. This increase was mainly due to higher refined product sales prices, although competitive conditions during the year prevented the Company from raising prices to the full extent allowed under Department of Energy regulations. Refined product sales volumes were down three percent from the 1976 level, over half of which was due to the sale in late 1976 of the Company's Canadian refining and marketing operations.

The total costs and other deductions increased \$189 million, or approximately four percent over 1976. Cost of materials, supplies, salaries and wages and services were up, reflecting the continuing impact of inflation. Crude oil costs increased as it was necessary to import more foreign oil to offset declines in domestic production and due to higher entitlement costs imposed by the federal government. Depletion and depreciation charges increased due to higher foreign crude oil production and higher costs of new domestic production facilities. Partially offsetting these increases were lower provisions for dry hole losses and amortization of nonproduction acreage costs of \$57 million due primarily to successful domestic exploration operations in the Gulf of Mexico.

Income taxes were \$272 million in 1977, a decrease of \$10 million from 1976. This is mainly due to higher investment tax credits related to domestic capital expenditure programs — credits amounted to \$48.8 million in 1977 in contrast to \$32.4 million in 1976. Partially offsetting this were higher taxes due to the higher level of earnings and the full-year effect of tax law changes which eliminated statutory depletion on certain natural gas sales in 1976.

1976 Versus 1975

Union's net earnings for 1976 were \$285.8 million, an increase of \$48.5 million over 1975 earnings of \$237.3 million. There were no extraordinary items in either period.

Higher earnings in 1976 were due primarily to increased refined product sales volumes and realizations increased demand and higher sales prices for minerals, higher natural gas prices, and higher investment tax credits. These improvements were partially offset by lower domestic crude oil and natural gas production as older U.S. fields continued their decline, higher expenses attributable to inflation, lower agricultural chemical sales realizations as demand decreased due to drought conditions in the western United States, and higher exploration expense and provisions for exploratory dry holes.

Total revenues in 1976 (including excise taxes collected for state and federal governments) were \$5.9 billion, up \$308 million, or six percent, from 1975, resulting from higher sales prices as well as a four percent increase in the volume of refined product sales. The increase in sales volume reflects the general increase in domestic demand after declines in 1974 and 1975.

Total costs and other deductions increased \$219 million, or four percent, over 1975 as the cost of materials, supplies, salaries and wages, and services were up, reflecting the continuing effects of inflation. Crude oil costs in 1976 were higher even though costs associated with federal government-imposed programs, primarily import taxes, were \$87 million lower than 1975. Provisions for exploratory dry holes in 1976 were \$27 million higher than in 1975, due to higher domestic drilling activity plus higher costs. Increased interest costs of \$8 million in 1976 reflect the effect of new long-term borrowing in the early part of the year.

Income taxes rose to \$282 million in 1976, an increase of \$41 million over 1975. Principally, this is due to the higher level of earnings, but it also reflects the continuing effect of tax law changes in the past few years which eliminated statutory depletion on crude oil in 1975 and on certain natural gas sales in 1976. Investment tax credits in 1976 were \$32 million, \$11 million higher than for 1975.

BUSINESS AND PROPERTIES OF UNION

General

Union Oil Company of California, incorporated in California on October 17, 1890, is engaged principally in petroleum, chemical and mineral operations. Petroleum operations involve the exploration, production, transportation and sale of crude oil and natural gas, and the manufacture, transportation and marketing of petroleum products. Chemical operations involve the manufacture, purchase and marketing of chemicals for industrial and agricultural uses. Mineral operations primarily involve the exploration, development, mining, processing and marketing of molybdenum, columbium, rare earths and uranium. Other operations include real estate development and sales; and construction, paving and rock plant operations which were sold effective May 31, 1978.

All phases of business in which the Company engages are highly competitive. Union's business will continue to be affected not only by such competition, but by general economic developments and governmental regulations, labor conditions and technological and international developments.

Financial data, by segment, are set forth below:

<u>1977</u>	<u>Revenues</u>	<u>Earnings Before Tax</u>	<u>Assets</u>	<u>Capital Expenditures</u>	<u>Depl. Depr. Amort.</u>
			Millions of Dollars		
Petroleum.....	\$5,445.5	\$650.3	\$3,760.0	\$615.7	\$429.8
Chemical.....	568.9	61.0	545.6	140.1	7.7
Minerals*.....	117.4	18.2	172.3	32.6	12.4
Other.....	142.9	6.3	96.0	15.4	3.5
Research, Administrative, Interest and Unallocated.....	4.7	(129.9)	150.6	9.1	2.5
Intersegment Eliminations (1).....	(180.2)				
Total.....	\$6,099.2	\$605.9	\$4,724.5	\$812.9	\$455.9

*Includes equity in affiliates..... \$10.0 \$69.4

<u>1976</u>	<u>Revenues</u>	<u>Earnings Before Tax</u>	<u>Assets</u>	<u>Capital Expenditures</u>	<u>Depl. Depr. Amort.</u>
			Millions of Dollars		
Petroleum.....	\$5,258.5	\$575.2	\$3,391.9	\$608.7	\$458.7
Chemical.....	531.2	82.4	401.0	173.9	7.7
Minerals*.....	92.1	19.9	147.3	8.6	13.5
Other.....	110.6	(2.9)	89.4	21.5	3.1
Research, Administrative, Interest and Unallocated.....	9.5	(106.8)	323.8	5.1	1.2
Intersegment Eliminations (1).....	(130.1)				
Total.....	\$5,871.8	\$567.8	\$4,353.4	\$817.8	\$484.2

*Includes equity in affiliates..... \$10.5 \$64.2

(1) Intersegment revenue eliminations are mainly transfers from petroleum operations to chemical operations at prices which approximate market.

1975	Revenues	Earnings Before Tax	Assets Millions of Dollars	Capital Expenditures	Depl. Depr. Amort.
Petroleum.....	\$4,970.1	\$441.1	\$3,254.5	\$599.4	\$397.2
Chemical.....	515.0	116.5	244.0	77.0	6.6
Minerals*.....	64.1	4.5	118.4	16.7	13.3
Other.....	106.9	7.7	80.7	5.5	3.3
Research, Administrative, Interest and Unallocated.....	12.1	(91.7)	176.8	2.4	1.1
Intersegment Eliminations (1).....	(105.0)				
Total.....	\$5,563.2	\$478.1	\$3,874.4	\$701.0	\$421.5

*Includes equity in affiliates.....

\$4.3 \$35.6

1974	Revenues	Earnings Before Tax	Assets Millions of Dollars	Capital Expenditures	Depl. Depr. Amort.
Petroleum.....	\$4,378.0	\$508.5	\$3,012.7	\$656.2	\$426.2
Chemical.....	462.1	86.1	162.2	13.8	6.2
Minerals*.....	90.4	14.2	111.1	13.6	18.5
Other.....	82.1	2.2	77.9	16.1	2.1
Research, Administrative, Interest and Unallocated.....	(25.8)	(113.8)	189.1	1.1	1.1
Intersegment Eliminations (1).....	(118.0)				
Total.....	\$4,868.8	\$497.2	\$3,553.0	\$700.8	\$454.1

*Includes equity in affiliates.....

\$15.0 \$30.9

1973	Revenues	Earnings Before Tax	Assets Millions of Dollars	Capital Expenditures	Depl. Depr. Amort.
Petroleum.....	\$2,633.8	\$284.9	\$2,541.7	\$372.0	\$258.7
Chemical.....	290.1	33.0	135.9	10.7	6.2
Minerals*.....	69.4	8.6	104.8	7.8	15.0
Other.....	79.6	4.0	52.7	5.3	2.1
Research, Administrative, Interest and Unallocated.....	9.1	(65.4)	167.7	2.4	1.1
Intersegment Eliminations (1).....	(56.3)				
Total.....	\$3,025.7	\$265.1	\$3,002.8	\$398.2	\$283.1

*Includes equity in affiliates.....

\$11.4 \$22.7

(1) Intersegment revenue eliminations are mainly transfers from petroleum operations to chemical operations at prices which approximate market.

Information regarding the geographic composition of Union's revenues, earnings before taxes on income and assets appears on page 70 of the accompanying financial statements.

Union anticipates capital expenditures of approximately \$800 million in 1978.

Sales by classes of similar products were as follows:

	1973	1974	1975	1976	1977
	Millions of Dollars				
Petroleum products.....	\$1,241.3	\$1,916.1	\$2,232.2	\$2,519.1	\$2,739.2
Crude Oil.....	695.7	1,587.0	1,857.0	1,718.0	1,579.3
Chemicals.....	285.1	454.1	507.6	522.0	560.8
Natural gas.....	111.3	148.0	175.2	239.2	271.3
Natural gas liquids.....	50.9	120.4	95.0	116.1	130.3
Minerals.....	57.5	75.4	59.1	81.4	106.8
Other.....	57.8	74.4	76.0	84.0	89.6
Excise taxes.....	361.3	351.3	350.9	352.6	365.6
Total sales.....	\$2,860.9	\$4,726.7	\$5,353.0	\$5,632.4	\$5,842.9

PETROLEUM OPERATIONS

Domestic Oil and Gas Exploration and Production Activities

Union is exploring in all major oil areas of the United States. At year end 1977, Union held approximately 3.5 million net acres of unproved lands in 28 states. Most of these unproved lands were located in Alaska, Texas, Utah, New Mexico, California and Arkansas.

At year end 1977, Union also held 990,000 net acres of proved oil and gas lands in the United States which were located in 21 states. Most of this proved land was located in Louisiana, Texas, California, Oklahoma and Montana. Federal offshore exploration and production areas are included in the contiguous states.

During 1977, Union spent \$357 million for the exploration and development of domestic oil and gas. Of this amount, \$74 million was spent in acquiring leases in federal offshore waters at competitive sales during the year. Most of this, \$59 million was spent for varying interests in eight tracts in the Gulf of Mexico. The other main acquisition was interests in four tracts in Alaska's lower Cook Inlet at a cost of \$14 million. In April 1978, Union acquired interests in four more tracts for \$20.9 million in a federal lease sale of land offshore from Texas and Louisiana.

A major thrust of Union's exploration and development activity in 1977 was on previously acquired acreage and this trend continues in 1978. Extensive development, platform construction and pipeline installation activities were carried on during the last 18 months in the Gulf of Mexico to bring the Company's discoveries to production. Development activity also continued in the Chunchula field in Alabama where approximately 30 wells are producing through test facilities and a full-sized extraction plant is expected to be completed in late 1979. In addition, Union extended the Chunchula field in April 1978 by drilling an additional well.

During 1977, the Company set Platform "C" in the Dos Cuadras field of the Santa Barbara Channel. The platform, built in 1968 but not installed due to litigation, permitted further development of the field in the first half of 1978. Union also participated in a new gas discovery in the Santa Barbara Channel in early 1978. The Company's capital expenditure program also emphasized increased recovery of known reserves through secondary and tertiary procedures principally in California. At year end 1977, Union was using or testing a wide variety of enhanced recovery methods in some 17 fields in four states.

Union's principal U.S. crude oil production comes from fields in Texas (25%), California (27%), Alaska (21%) and Louisiana (16%). Approximately, 55 percent of the Company's domestic natural gas production is from onshore and offshore Louisiana fields, with most of the balance coming from Texas, Alaska, California, Oklahoma and New Mexico.

Union has an ownership interest in 53 gas processing plants in the United States and operates 16 of these.

Foreign Oil and Gas Exploration and Production Activities

Union is participating in exploration and/or production activities in 16 foreign countries.

In Canada, Union Oil Company of Canada (an 87% owned subsidiary) holds approximately 5.3 million acres of unproved lands, 304,000 acres of proved lands, and varying interests in eight natural gasoline plants located near major gas fields. Union Oil Company of Canada's crude oil production comes mainly from fields in Alberta and Saskatchewan, while natural gas production comes mainly from fields in British Columbia and Alberta. In 1977, most oil and gas exploration and development activities were concentrated in Alberta and British Columbia. Union Oil Company of Canada is active in the West Pembina oil and gas area where recent drilling by others has been successful; and the Company holds an interest in two blocks where it expects to commence drilling during the latter part of 1978. The Company participated in drilling several wells in the Alberta foothills, where it has acquired several large land blocks, and a significant gas discovery was made in 1977.

In the Persian Gulf, offshore Iran, a Union subsidiary has a 12½ percent interest in an agreement currently covering 104,000 acres where two separate discoveries have been made. As the result of a new development program, and the addition of a gas-lift system completed in early 1978, Union's share of production from one of these discoveries, the Sassan field, is currently about 25,000 barrels per day. The other discovery is being evaluated as to its commercial potential.

Union has a 31¼ percent interest in two blocks and a 21 percent interest in a third block in the British sector of the North Sea. In addition, the Company has a 15½ percent interest in another block in the British sector of the Atlantic Ocean. On Block 2/5, in which Union's interest is 31¼ percent, the Heather field was discovered in 1973, with wells producing on test at rates as high as 9,000 barrels of crude oil daily. Union concluded an agreement in 1976 to participate in the Ninian pipeline and Sullom Voe terminal facilities for receiving production from the Heather field. Installation of the platform commenced in 1977, drilling therefrom began in June 1978 and commencement of production began in October, 1978. By agreement, British National Oil Corporation (BNOC) has rights to purchase at world market prices 51 percent of Union's share of crude oil production from Block 2/5 commencing about two years after the start of production.

In Indonesia, Union now has production from five fields in the East Kalimantan contract area: Attaka, Melahin, Kerindingan, Sepinggan and Yakin. The most important of these remains at Attaka field, where total production, including liquids extracted from the gas stream, reached a new high of 121,700 barrels per day in December 1977, of which Union's gross interest was 60,800 barrels per day.

During 1977, the Indonesian government proposed methods to conform its tax laws so that Indonesian income taxes paid under production sharing agreements will continue to qualify for foreign tax credit treatment after 1977 under rulings announced by the United States Internal Revenue Service. The proposals have been formally approved by the Internal Revenue Service and promulgated by the Indonesian government.

Offshore Thailand, Union has found oil and/or gas on four structures in the Gulf of Thailand. An agreement in principle to dedicate for sale at least a trillion cubic feet of natural gas from one of these structures, held 80 percent by Union, has been consummated. If the extent of the field is confirmed by development drilling this year, platform construction will begin next year with production scheduled for 1982.

In August 1978, Union announced a gas discovery on Block L-11 in the Netherlands sector of the North Sea. Additional drilling will be necessary to evaluate the commercial potential of the discovery.

In August, 1978, Union was granted a concession license by the government of Egypt to explore for petroleum in the Gulf of Suez.

Varying exploratory activities also continue in western offshore Ireland, Japan, the Egyptian Red Sea and Pakistan. Substantial exploratory licenses are held in each of these areas.

In light of the changing relationships between international oil companies and host governments in the foregoing and other parts of the world, including changes by oil producing countries in posted or tax-reference prices for crude oil, increases in tax rates (sometimes retroactively) and demands for increased participation in the ownership of operations, it is recognized that Union's activities in these and other foreign countries may be curtailed or terminated as a result of Union's inability to recover the costs of continued exploration, development and production or to recover an adequate return on its investment during the coming years.

Operating and Reserve Statistics

Set forth below are consolidated operating and reserve data for the periods indicated.

Proven and undeveloped oil and gas acreage as of December 31, 1977:

	Proven Acreage		Undeveloped Acreage	
	Gross	Thousands of Acres Net	Gross	Net
United States.....	1,119	990	4,055	3,460
Canada.....	610	304	8,487	5,267
Middle East.....	70	9	2,799	2,769
Far East.....	16	13	48,176	31,961
Other Foreign.....	32	4	4,910	3,865
Total.....	1,847	1,320	68,427	47,322

Net production of crude oil, condensate, natural gas and natural gas liquids after deduction of royalties and interests of others for the periods indicated:

	1973	1974	1975	1976	1977
Crude Oil (barrels per day)					
United States.....	235,222	220,523	209,649	193,726	175,684
Canada.....	29,249	22,445	15,540	14,611	13,570
Middle East.....	23,020	24,328	21,934	19,021	22,768
Far East*.....	36,415	50,708	57,365	76,044	79,769
Other Foreign.....	7,893	6,576	4,050	—	—
Total.....	331,799	324,580	308,538	303,402	291,791
Condensate (barrels per day)					
United States.....	15,052	13,833	12,100	11,745	11,925
Canada.....	3,811	2,828	2,623	2,044	1,744
Total.....	18,863	16,661	14,723	13,789	13,669
Natural Gas (Mcf per day)					
United States.....	1,466,255	1,463,331	1,384,339	1,332,526	1,231,279
Canada.....	63,952	71,770	53,193	54,852	55,412
Other Foreign.....	3,854	4,724	4,683	3,578	2,855
Total.....	1,534,061	1,539,825	1,442,215	1,390,956	1,289,546
Natural Gas Liquids — Leasehold Ownership (barrels per day)					
United States.....	16,252	16,526	14,590	13,376	14,471
Canada.....	1,470	1,328	1,365	1,346	1,157
Total.....	17,722	17,854	15,955	14,722	15,628
Natural Gas Liquids — Plant Ownership (barrels per day)					
United States.....	17,847	17,492	18,031	16,998	14,077

* Includes gross production for Indonesia under production sharing agreement.

Net proved developed and undeveloped oil and gas reserves as of December 31, 1977:

	<u>Developed</u>	<u>Undeveloped</u>	<u>Total</u>
Crude Oil and Condensate (thousand barrels)			
United States.....	448,486	116,985	565,471
Canada.....	64,877	664	65,541
Middle East.....	62,556	34,625	97,181
Far East*.....	143,626	—	143,626
Other Foreign.....	—	41,016	41,016
Total.....	719,545	193,290	912,835
Natural Gas (Wet) (billion cubic feet)			
United States.....	4,649	1,700	6,349
Canada.....	366	126	492
Other Foreign.....	17	—	17
Total.....	5,032	1,826	6,858

* Includes gross reserves for Indonesia under production sharing agreement.

During 1977 and early 1978, reserve estimates were filed with the Federal Energy Regulatory Commission, the Federal Trade Commission and the governments of The People's Republic of China, Great Britain, Indonesia, Iran and Norway. Such reserve estimates, although as of differing dates, were determined on bases that were consistent with the estimates reported above.

Based on historical performance, the Company currently estimates that 293,000 barrels per day of crude oil and condensate and 1,264,000 mcf per day of natural gas could be produced from proved developed reserves as of December 31, 1977 using presently installed equipment under existing economic and operating conditions for the year 1978.

At December 31, 1977, the approximate number of Union's producible oil and gas wells were as follows:

Oil	
Gross Wells.....	22,637
*Net Wells.....	8,508
Gas	
Gross Wells.....	2,544
*Net Wells.....	1,087

* Net wells represent the cumulative total of Union's ownership interest in gross wells.

At December 31, 1977, the Company had 587 gross and 347 net wells with multiple completions. In addition, at year-end Union was in the process of drilling 69 gross oil and gas wells, the equivalent of 35 net oil and gas wells.

Net well completions during the last five years were as follows:

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Net exploratory wells completed.....	11	15	14	28	25
Net development wells completed.....	141	172	152	183	278

Domestic Refining

Union owns and operates five refineries in the United States which manufacture a complete line of high-quality petroleum products and certain basic chemicals, including automotive and aviation gasolines, liquefied petroleum gases, naphthas and solvents, jet and turbine fuels, kerosene, diesel oils, heating oils, automotive and industrial lubricating oils, greases, waxes, asphalts, residual fuel oils and petroleum cokes. Rated capacities of crude oil processing units are summarized below:

<u>Refinery</u>	<u>Barrels Per Calendar Day</u>
California	
Los Angeles.....	108,000
San Francisco.....	70,000
Santa Maria*.....	41,000
Illinois	
Chicago.....	151,000
Texas	
Beaumont.....	<u>120,000</u>
	490,000

* Makes unfinished products for further processing at the Company's San Francisco Refinery.

Average total input to crude oil processing units in barrels daily was 465,000 in 1973, 439,100 in 1974, 456,500 in 1975, 440,300 in 1976, and 451,900 in 1977.

Foreign Refining

In the Republic of Korea, Kyung In Energy Company, Limited, a 50 percent owned affiliate of a Union subsidiary, operates a 60,000 barrel-a-day capacity refinery. Crude oil throughput at the refinery increased 28 percent over 1976 to 50,800 barrels per day. Kyung In also operates a 325,000 kilowatt thermal power plant which furnishes 30 percent of the power needs of the city of Seoul and the surrounding area. Union's investment is substantially insured by Overseas Private Investment Corporation, a United States Government corporation, against certain political risks including expropriation.

Petroleum Transportation

A substantial part of Union's crude oil production and purchases is transported to the Company's refineries by some part of the 10,100 miles of raw material pipelines which Union owns, wholly or partially, or leases. The Company also owns or has an interest in approximately 7,300 miles of refined product pipelines.

Union Alaska Pipeline Company, a wholly-owned subsidiary, has a 1.66 percent participation interest in the Trans-Alaska Pipeline System which commenced operation in 1977 to transport crude oil from the North Slope area of Alaska to the port of Valdez in Alaska.

The Company's marine fleet at year-end consisted of 15 tankers and supertankers, plus other smaller vessels, all held under long-term charter agreements or owned directly or through subsidiaries.

During 1977, Union chartered a 264,000 ton very large crude carrier and four 85,000 ton tankers to provide transportation of foreign crude oil to help meet the Company's domestic refinery requirements and improve the efficiency of the Company's transportation system.

Union also has an extensive fleet of product tank trucks.

Domestic Petroleum Marketing

Union's products are distributed in 42 states under the "Union 76" trade name. Marketing was conducted through approximately 1,000 wholesale marketing and bulk distributing stations and approximately 14,000 service stations and other retail outlets at the end of 1977 including over 300 auto/truckstops, many of which are located on the interstate highway system. Substantially all service stations and other retail outlets, including units owned and leased by Union, are operated by independent dealers. The wholesale marketing stations distribute products to the Company's retail outlets, sell to others for resale, and sell directly to consumers. Through retail outlets, the Company also sells branded tires, batteries and other automobile accessories. Premium motor oils and greases are also marketed through wholesale distributors and to independent marketers throughout the U.S. and in many foreign countries.

During the last 18 months, Union sold its marketing properties in Wyoming and Montana and began the process of selling its properties in Utah and southeastern Idaho. It had limited sales in these marketing areas. In the east, reduction of investments began in low penetration markets in order to concentrate on growth markets where Union has strong representation.

Foreign Petroleum Marketing

Union subsidiaries market crude oil and petroleum products to customers in Japan, Korea and other countries outside the United States. Union had a substantial minority interest in the Maruzen Oil Company, Ltd., a major Japanese refiner and marketer, which Union sold to Japanese interests in October, 1978. During 1977, Union's overseas marketing subsidiary, Unoco, sold to Maruzen approximately 97,000 barrels per day of crude oil produced by Union and others.

Domestic Geothermal Activities

Union has leasehold interests in approximately 21,000 acres in the Geysers Geothermal Field of northern California, the only commercial geothermal project in the United States. Steam from this field is sold to a public utility which has installed generating capacity of over 520,000 kilowatts. Two 110,000 kilowatt power plants are under construction, with one scheduled for completion in 1978 and the other in 1979. To provide steam for these new plants, nine wells were drilled in 1977 and drilling is continuing in 1978.

The Company is also exploring for new geothermal reserves elsewhere in the western United States. In California's Imperial Valley, Union has a prominent position in three out of four of the major geothermal resources that have been delineated. Exploration and testing of Union's properties in two of these areas is in an advanced stage and agreements have been negotiated to sell the geothermal energy to public utilities which would begin operation with 10,000 kilowatt power plants.

In New Mexico, the U.S. Department of Energy has selected a proposal by Union and the Public Service Company of New Mexico to develop and operate the first full scale geothermal hot water project in the country. A definitive agreement is being negotiated. Subject to negotiation of a contract, the 50,000 kilowatt project would cost approximately \$100 million, of which federal funds would account for about one-half.

Foreign Geothermal Activities

Operating as a contractor for the Philippine government-owned National Power Company, Union is developing two major geothermal fields on Luzon Island. Construction is underway on two electrical power plants at the Tiwi field with a combined capacity of 220,000 kilowatts and for one plant at the Los Banos field with capacity of 110,000 kilowatts. The first plant in the Tiwi field is scheduled to go into operation in 1978 and in the Los Banos field in 1979.

Geothermal Lands, Reserves and Production

As of December 31, 1977 the Company held 346,600 net acres of geothermal lands, of which over 4,300 acres, all in the Geysers Geothermal Field, are proved with respect to production. Most of the unproved acreage was located in New Mexico, California, Nevada and Utah. At year end, the Company had 94 net producible geothermal wells, located primarily in the Geysers Geothermal Field, New Mexico, and the Philippines.

Geothermal reserves and production for the last five years were as follows:

	1973	1974	1975	1976	1977
Net reserves at year-end* —					
Million megawatt hours.....	40	56	64	87	110
Million equivalent oil barrels**.....	61	84	96	131	165
Net daily production — megawatt hours.....	900	1,800	3,000	3,600	3,600

*Reserves are located in the Geysers Geothermal Field and in the Philippines.

**Based upon the number of barrels of oil required to generate an equivalent amount of electricity.

Chemical Operations

Early in 1978, the Union Chemicals Division was formed combining the operations of the Amsco Division and Collier Carbon and Chemical Corporation. The Chemical Division's operations are divided into three product groups: nitrogen, petrochemical and carbon.

The nitrogen group manufactures, purchases and markets a wide variety of chemical fertilizers and industrial chemicals. Union believes it is the largest producer of ammonia on the West Coast of the United States (including Alaska) and one of the largest in the United States. It operates ammonia and urea plants located at Brea, California and Kenai, Alaska. Recent completion of new plants at Kenai, Alaska increased Union's ammonia and urea production capacity to 4,100 and 2,850 tons per day, respectively. Natural gas, the prime raw material for these plants, is supplied from the Company's extensive Alaskan reserves. Enlarged urea and ammonia storage and terminal facilities were also completed in connection with the new plants.

A new ship, named the "S.S. Cornucopia", designed to transport liquefied ammonia from Kenai to the West Coast commenced service in the spring of 1978. In addition, Union's Chemical Division has two barges on long-term lease for delivery of urea, and two refrigerated river barges to transport ammonia up the Columbia River.

The petrochemical group markets hydrocarbon solvents and petrochemicals manufactured by Union's refineries, manufactures and markets polymer emulsions and hot melt adhesives, and sells chemicals and other products purchased from others. A new hot melt adhesives plant at Tucker, Georgia was in full operation in early 1978 thereby doubling the Company's production capacity for these products.

The carbon group manufactures, purchases and markets a wide range of petroleum coke and high-strength graphites.

Mineral Operations

On July 29, 1977 MolyCorp, Inc. was acquired by Union. MolyCorp, now operating as a wholly-owned subsidiary, is believed by Union to be the world's largest producer of rare earth products and an important producer of molybdenum. MolyCorp has a 33 percent interest in a Brazilian company, Companhia Brasileira de Metalurgia e Mineracao, a producer of columbium. Early in 1978, MolyCorp sold its 49 percent interest in Kawecky Beryco Industries, Inc., a leading producer of specialty metals and chemicals.

Molycorp's rare earth operations are based upon a high-grade bastnasite ore deposit at Mountain Pass, California and processing plants at York, Pennsylvania; Louviers, Colorado and Mountain Pass. Based upon Molycorp's average annual production of rare earth concentrates during 1976 and 1977, Union estimates that proven ore reserves are adequate for at least fifteen more years of continued operation. The major uses for rare earth products are in television and fluorescent lighting phosphors, petroleum cracking catalysts, glass, iron and steel.

Molycorp's open pit molybdenum mine at Questa, New Mexico is almost depleted. It is expected to be phased out during 1978 but milling operations and molybdenum production will continue into 1980 using ore which has been stockpiled.

Over the past several years, exploratory drilling and feasibility studies conducted by Molycorp and a partner established a larger area of molybdenum mineralization at Questa. Late in 1977, Molycorp agreed with its partner to dissolve the partnership and full ownership of the properties now rests with Molycorp. Molycorp has conducted technical and feasibility studies relating to the development of a large scale underground mining operation with production beginning in the early 1980's. No final decision on development of such a mine has been made.

Molybdenum processing operations are conducted at plants located in Washington and York, Pennsylvania. Molybdenum is used in the production of stainless and alloy steels, non-ferrous alloys, pigments, lubricants and catalysts.

Molycorp's annual production of minerals is as follows — thousand pounds:

	1973	1974	1975	1976	1977
Molybdenum in concentrates.....	10,866	11,200	11,114	11,509	8,130
Rare earth concentrates.....	38,682	43,883	32,936	28,745	33,861

Minerals is developing a \$45 million uranium mining and milling complex in Sweetwater County, Wyoming. Mill construction work is pending issuance of federal and state permits. Difficulties and delays have been encountered in obtaining these permits. It is anticipated that they will be obtained during the latter part of 1978 or early 1979. See BUSINESS AND PROPERTIES OF SILVER BELL — the Sweetwater Project at Page 47. A feasibility study on a project to mine and mill uranium from deposits approximately 33 miles northwest of Wickenburg, Arizona was completed in July 1978. This project is known as the Anderson Project. Minerals estimates that 9,162,000 pounds of recoverable proven reserves with an average grade of 0.072% U_3O_8 (using a mill recovery factor of 89%) can be commercially mined. Final plans and schedules for mine development have not been determined, nor has a mining permit been obtained.

Union has a 25 percent interest in Cyprus Pima Mining Company which owns a large open pit mine south of Tucson, Arizona. The mine was closed in September 1977 due to the depressed price of copper.

Union's equity in Cyprus Pima's earnings was a \$2.2 million loss in 1977 compared to \$.8 million gain in 1976.

Other Operations

In Colorado, Union has 20,000 acres of patented oil shale lands which it believes are a potential source of petroleum supply. The Company also has unpatented placer mining claims covering an additional 20,000 acres of oil shale lands (currently being contested by the Federal Government) and 10,000 acres of associated lands including water rights and areas for disposal of spent shale. Early in 1978, the Company announced plans to build a \$100 million experimental oil shale project if Congress creates the necessary investment climate for an oil shale industry. The project would utilize a Union-developed surface retort capable of processing 10,000 tons per day of oil shale to extract 9,000 barrels

a day of raw shale oil. Initially, Union plans to sell the shale oil for direct use as boiler fuel in electrical generating plants.

Union, through a wholly-owned subsidiary, develops and markets real estate for industrial, commercial and residential uses on surplus and purchased land.

None of the activities described in this section or in the preceding section entitled "Mineral Operations" is considered to be material to Union, either in relation to its total consolidated assets or as a contributor to Union's consolidated earnings, currently or for the foreseeable future.

Research

Union has a modern research center located at Brea, California where research scientists, engineers and supporting personnel are currently working to develop new and improved products, processes and techniques for use in every phase of the petroleum business and in pertinent areas of the chemical industry.

Union owns some 1,700 active patents in the United States and abroad which are generally available to others under revenue producing licensing agreements.

Union's expenditures for research and development approximated \$17.1 million and \$17.2 million in 1977 and 1976, respectively.

Employees

At June 30, 1978, Union had 16,191 employees, many of whom are covered by labor agreements with various unions. In January 1977, an agreement was reached with the Oil, Chemical and Atomic Workers International Union on a number of contracts covering employees in all refineries and several large distribution terminals. Agreement was also reached early in 1977 with the International Union of Petroleum Workers on a number of contracts covering production, pipeline, telecommunications and certain marketing employees. In March 1978, a new three-year contract was negotiated with the Oil, Chemical and Atomic Workers International Union covering workers at MolyCorp's Questa, New Mexico mill and mine complex.

All these agreements provide for substantial wage and fringe benefit increases.

Government Regulation

The petroleum industry has been subject to mandatory allocation and price control regulations established by the Department of Energy under the authority of the Emergency Petroleum Allocation Act of 1973. This authority was continued and extended by the Energy Policy and Conservation Act of 1975, the Federal Energy Administration Authorization Act of 1977, and the Department of Energy Organization Act of 1977. The regulations have established maximum prices permissible for domestic crude oil and certain petroleum products. Increased costs relating to refining and marketing activities are allowed to be passed through to product prices in a specified manner, and subject to certain conditions. The regulations reduce the price Union receives for a portion of its crude oil, and have created additional administrative expense. The regulations, in some instances, may adversely affect Union's ability to recover increased costs. Union's ability to recover increased costs may be further restricted by market conditions.

Regulations promulgated under the 1973 and 1975 Acts are mandatory for 40 months and may be imposed at the discretion of the President thereafter. The Company is unable to predict how long the regulations may remain in effect, or what effect such program (or any modification thereof) may ultimately have on its business until September 30, 1981.

Other provisions of the 1975 Act give the President authority to be the sole importer and purchaser of crude oil and petroleum product imports, establish refinery operations levels, force

conversion to coal, control exports of petroleum products, natural gas and petrochemical feedstocks, order allocations of supplies, determine production rates on federal lands, and establish a strategic petroleum reserve. The President is required to establish contingency plans for energy conservation and rationing.

Legislation proposed by President Carter would impose a new well-head tax on some domestic crude oil production and modify the present price controls on both domestic natural gas production and domestic crude oil production. A House-Senate Conference Committee has adopted a compromise version of this legislation as it affects natural gas, which has been approved by the Senate and must be voted upon by the House. It is uncertain at this time whether these proposals will be adopted, or in what form, and it is premature to attempt to analyze their impact on Union's operations. However, if adopted, these proposals could affect the price at which Union sells its products, and might affect demand for petroleum products.

All sales of natural gas to interstate pipeline companies for resale are subject to price regulation by the Federal Energy Regulatory Commission of the Department of Energy under the Federal Natural Gas Act. Certain interstate crude oil pipeline subsidiaries of Union are subject to regulation as common carriers by the Federal Energy Regulatory Commission. Union, as lessee from the United States, is subject to regulations of the United States Department of the Interior under the Outer Continental Shelf Lands Act, which regulations have been amended to impose stricter controls on operations and to establish responsibility for cleanup and damages in the event of oil spills and under the Mineral Leasing Act of 1920 covering onshore lands. In addition, state regulations, which have been amended to impose stricter controls, are imposed on both state owned and privately owned lands.

A number of federal and state legislative proposals would, if enacted, significantly adversely affect the petroleum industry, including Union. These proposals involve, among other things, the imposition of additional taxes, the divestiture of certain operations, an excess profits tax, land use controls, and other restrictive measures.

Environmental Matters

Compliance with federal, state and local laws and provisions regulating the discharge of materials into the environment or otherwise specifically relating to the protection of the environment is having an increasing adverse impact on Union's operations. Federal legislation applicable to Union's operations includes the Federal Water Pollution Control Act Amendments of 1977 which impose increased liability for oil spills or discharges in navigable waters upon Union or persons responsible for such an occurrence and the Federal Clean Air Act Amendments of 1977 which relate to the reduction or elimination of air emissions. Various state and local governments have adopted or are considering the adoption of such laws and regulations.

In 1977, Union spent approximately \$29 million in order to comply with, and where technology exists, exceed applicable federal and state environmental regulations. Capital expenditures in 1978 related to the protection of the environment are estimated at \$32 million. Union expects such expenditures to continue in future years, but they are not expected to be significant relative to Union's capital structure and normal capital expenditure programs. Although Union believes that it will be able to meet the requirements of existing laws and regulations, changes in operating procedures and the acquisition of additional pollution control facilities may be necessary to meet regulatory standards in the future.

Union has been a party to a number of administrative and judicial proceedings arising under federal, state and local provisions relating to environmental protection. Such proceedings include actions for civil penalties or fines for alleged violations of such statutes and ordinances. Approximately 15 administrative and judicial proceedings are pending. Approximately 90 applications for National Pollutant Discharge Elimination System permits are pending, as are 8 appeals related to the issuance of such permits.

Union does not believe that these proceedings are, in the aggregate, material to its business or financial condition and does not anticipate any significant curtailment or interruption of its major operations as a result of any alleged violation of environmental control laws or regulations. Union has also joined or intervened with the American Petroleum Institute and other oil companies in actions relating to Environmental Protection Agency effluent limitation guidelines, air quality regulations, ammonia fertilizer guidelines and benzene regulations.

Pending Legal Proceedings

Union, along with other major oil companies, is a defendant in separate civil antitrust suits brought by the states of Florida, Connecticut, Kansas, California, Arizona, Oregon and Washington filed between 1973 and 1977. These actions charge violations of federal and state monopoly and restraint of trade statutes in connection with exploration, production, refining and marketing of petroleum and petroleum products. The suits all seek treble damages, in unspecified amounts, on behalf of the states and classes of other consumers of petroleum products, injunctive relief and divestiture of the exploration and production segments of the defendants' businesses. The Judicial Panel on Multidistrict Litigation has transferred the above-listed actions, and the action brought by the City of Long Beach described below, to the United States District Court for the Central District of California for consolidated or coordinated pretrial proceedings. (The consolidated pretrial proceedings are No. MDL-150.)

The City of Long Beach is a plaintiff, and the State of California has intervened, in a suit filed on June 27, 1975, in the United States District Court for the Central District of California (No. 75-2232 WPG). The complaint alleges violations of federal and state antitrust statutes arising out of exploration, development and production of crude oil in tidelands and other lands in the Long Beach, California, area.

Union and its subsidiary, Collier (which was merged into Union in early 1978) together with six other fertilizer marketers and producers, are defendants in civil antitrust actions brought by the States of Alaska, Idaho, Montana, Washington, and Oregon and individual residents of the State of Oregon. The suits were filed in the United States District Court for the Eastern District of Washington at Spokane on June 11, 1975, by the States of Idaho (No. C-75-120), Montana (No. C-75-119), and Washington (No. C-75-118) and the individual plaintiffs, by the State of Alaska (No. C-75-156) on July 22, 1975, and by the State of Oregon (No. C76-287) on July 1, 1976. The suits allege violation of federal and state antitrust statutes arising out of the sale of fertilizer in the northwest region of the United States and seek treble damages, in unspecified amounts, injunctive relief and divestiture of the ownership and operation of certain marketing and distribution outlets.

On December 24, 1970, Union was served with a summons and complaint in an action filed in the Superior Court for Los Angeles County, California, entitled *Philip Ruben and Phyllis Ruben, et al. v. Union Oil Company of California* (No. LASC4C 992907). Plaintiffs sued individually and on behalf of members of a class described as residents of the State of California who have charge accounts with defendant and who have made payments of interest of more than ten per cent per annum within the preceding four-year period. Plaintiffs sought an injunction against further assessment by Union of finance charges on its monthly credit card billings in excess of ten per cent per annum and damages in an unspecified amount. Plaintiffs' claims were denied by the trial court, and the decision has been appealed.

On March 5, 1974, Union was served with a petition in an action entitled *Mecom v. Union Oil Company of California, et al.*, brought in the District Court of Harris County, Texas (No. 973,515). Plaintiff claims rights in concessions, rights or contracts relating to the production, exploration and marketing of oil and gas within a certain geographic area of the Middle East and an accounting.

Union is named as a defendant in actions brought by purported representatives of classes of lessee and sublessee gasoline dealers (*Bogosian v. Union et al.* and *Parisi v. Union et al.*) in the United States District Court for the Eastern District of Pennsylvania. The complaints which were served on May 19, 1971 and October 26, 1971, respectively, allege violations of Sections 1 and 2 of the Sherman

Anti-Trust Act and demand an undetermined amount of damages to be trebled; injunctive relief; and divestiture of those portions of defendants' businesses which involve the acquisition of real estate by purchase or lease and the leasing or subleasing of such real estate for use as retail gasoline service stations, plus costs and attorneys' fees. Orders entered in June, 1975 dismissing said class actions were vacated by the United States Court of Appeals for the Third Circuit and the actions were remanded to the District Court for further proceedings.

A summons and complaint were served upon Union in an action entitled *Evanson, et al. v. Union and Department of Energy* (No. C4-75-671, U.S. District Court for the District of Minnesota — Fourth Division) on January 5, 1976. Plaintiffs, individually and as representatives of a class of car washes, seek reinstatement of discounts in existence on May 15, 1973 and the return of discounts withdrawn after September 1973. The United States Department of Energy intervened in March 1978 and was realigned as a plaintiff. The complaint in intervention alleges that Union improperly eliminated certain discounts to customers of gasoline and oil during the period from August 19, 1973 to March 31, 1978; that Union's base prices were improperly computed; and that Union overcharged some customers. The Department of Energy requested that Union be required to recalculate its base prices, refund overcharges, be enjoined from further violations of the Emergency Petroleum Allocation Act of 1973, pay civil penalties for each separate pricing violation and pay costs of litigation.

The allegations of unlawful practices in these actions have been denied and the actions will be vigorously defended by Union. Management believes the foregoing actions can be successfully defended; in view of the broad and largely undefined relief sought, however, an adverse decision could have a significant effect upon the scope and nature of Union's operations.

MANAGEMENT OF UNION

Directors

The Board of Directors of Union consists of 14 members who are elected to hold office until the next annual meeting of shareholders and until their successors are duly elected and qualified. The following table sets forth certain information with respect to Union's directors, including the number of Union Common Shares owned beneficially as of June 30, 1978. None of the directors owns any other equity securities of Union. As of June 30, 1978, no director or officer of Union owned any shares of Silver Bell or Mancos of record or beneficially.

<u>Name</u>	<u>Principal Occupation(s)</u>	<u>Year First Became Director</u>	<u>Common Shares Beneficially Owned (b)</u>
William F. Ballhaus	President, Beckman Instruments, Inc. <i>Analytical instruments, systems and components</i>	1977	500
Claude S. Brinegar	Senior Vice President of the Company	1968	2,064
Ray A. Burke	Senior Vice President of the Company	1966	16,561
Robert Di Giorgio	Chairman and Chief Executive Officer, Di Giorgio Corporation <i>Multi-market company active in manufacturing and distributing consumer goods and forest products</i>	1958	300
William H. Doheny	Personal Investments	1954	152,556
Prentis C. Hale	Chairman, Executive Committee, Carter Hawley Hale Stores, Inc. <i>Retail department stores</i>	1956	372

Name	Principal Occupation (a)	Year First Became Director	Common Shares Beneficially Owned (b)
Lewis B. Harder	Chairman of the Board, Molycorp, Inc. <i>A wholly-owned subsidiary</i>	1977	200
Fred L. Hartley	Chairman and President of the Company	1960	36,179
T. C. Henderson	Vice President of the Company	1976	9,530
Donald P. Jacobs	Dean, Graduate School of Management, Northwestern University	1972	100
William S. McConnor	Senior Vice President of the Company	1973	3,186
Peter O'Malley	President, Los Angeles Dodgers, Inc. <i>Professional baseball club</i>	1976	200
Charles F. Parker	Financial Consultant to the Company	1963	19,355
Donn B. Tatum	Chairman of the Board, Walt Disney Productions <i>Entertainment and recreational activities</i>	1977	1,000

(a) The offices in this column refer to Union unless otherwise stated.

(b) Reported by Directors as of June 30, 1978, and includes shares held in the name of wives, minor children or relatives as to which beneficial ownership is disclaimed. Does not include shares held by the Trustee under the Employees Profit Sharing Plan and Employee Stock Ownership Plan, as further discussed in Note 2 under "Remuneration" below.

Remuneration

The following table sets forth information concerning the remuneration paid to the three highest paid officers and all directors who received aggregate direct remuneration in excess of \$40,000 in 1977:

Name	Capacity in which Remuneration was Received	Aggregate Direct Remuneration	Incentive Compensation Cash Awards for 1977 (1)	Company Contributions Under Employees Profit Sharing Plan and ESOP (2)
Fred L. Hartley	Chairman and President	\$ 328,333	\$107,500	\$13,232
Claude S. Brinegar	Senior Vice President	167,333	57,000	7,369
Ray A. Burke	Senior Vice President	167,333	42,500	7,369
Lewis B. Harder	Chairman of the Board, Molycorp, Inc.	70,995 (3)		
T. C. Henderson	Vice President	87,833	22,500	4,548
William S. McConnor	Senior Vice President	145,333	42,500	6,567
Charles F. Parker	Senior Vice President	170,333	50,000	7,478
Directors and Corporate Officers as a group, 29 in number, including those listed above		2,162,535		

(1) In addition to the cash awards shown above which were paid in 1978, but applicable to 1977 operations, cash awards were made in the amount of \$221,550 to eleven other present officers and \$1,949,510 to other key employees.

Under the revised Incentive Compensation Plan (the "Plan") approved by the shareholders in 1968, annual awards may be granted to a limited number of executives and key employees at the discretion of the Compensation Committee of the Board of Directors, which is comprised entirely of non-employee directors. Awards made in the current year are applicable to the prior year's operations and may be in the form of cash and deferred compensation. The deferred compensation portion of the Plan provides for payment over various intervals and may extend up to ten years following retirement. The right to payment of deferred awards will be forfeited in the event of voluntary resignation, early retirement or discharge for cause.

Deferred awards applicable to 1977 (made in 1978) and the total deferred amounts accrued but unpaid are, respectively: \$201,254 and \$702,670 to Mr. Hartley, \$45,600 and \$45,600 to Mr. Brinegar, \$77,388 and \$260,510 to Mr. Burke, \$42,947 and \$153,611 to Mr. Henderson, \$71,898 and \$216,921 to Mr. McConnor, \$86,715 and \$272,108 to Mr. Parker, and \$135,462 and \$320,623 to eleven other present officers, and \$1,009,729 and \$2,910,696 to other key employees.

- (2) Company contributions under the Employees Profit Sharing Plan and the Employee Stock Ownership Plan ("ESOP") are allocated to all employees who became members of these plans on the basis of the members' rates of pay (a member's pay in excess of \$100,000 is not considered in making allocations under ESOP). Officers participate as members of these plans on the same basis as other employees. In 1977, Company contributions totaled \$11,094,769 under these plans, of which \$91,763 was allocated to Company officers.
- (3) Remuneration for the period July 29-December 31, 1977, including a bonus relating to the entire year.

Retirement Plan

The Company has a noncontributory Retirement Plan covering substantially all employees which provides participants with retirement benefits based on a formula relating such benefits to salary and years of service. These benefits are subject to limitation under certain provisions of the Employee Retirement Income Security Act of 1974. Where that occurs, the Company has a retirement supplement designed to maintain total retirement benefits at the Retirement Plan formula level. Maximum annual benefits (including Social Security) payable at age 65 to participants in the plans, including all persons named in the foregoing remuneration table except for Mr. Harder*, are illustrated in the following table:

Annual Average Salary 3 Consecutive Highest Paid Years Out of Last 10 Years Preceding Retirement	Estimated Maximum Annual Retirement Benefits			
	Service Years			
	25	30	35	40
\$ 15,000	\$ 9,300	\$ 10,100	\$ 11,000	\$ 12,200
25,000	13,300	14,900	16,600	18,600
50,000	23,300	27,000	31,300	35,800
150,000	66,300	79,600	92,900	106,400
250,000	109,900	132,200	154,600	177,000
350,000	153,600	184,800	216,200	247,600

* Mr. Harder is a participant in the separate retirement plan maintained by Molycorp. Mr. Harder's estimated maximum annual retirement benefit is \$33,000 assuming that the highest average of the aggregate compensation in any three consecutive years during the last ten years of employment will constitute the basis for determining Mr. Harder's retirement benefit.

Information Concerning Options on Common Shares

Under the Stock Option Plan of 1975, any option granted under a shareholder approved stock option plan may include a stock appreciation right either at the time of grant or by amendment. Such right is exercisable only to the extent the option is exercisable and only with the consent of the Compensation Committee. Such right permits an optionee to surrender an unexercised option with respect to any number of unpurchased shares and to receive in exchange a lesser number of shares having an aggregate value equal to the difference between the option price of such unpurchased shares and the market value of such unpurchased shares on the date the option is surrendered. The Company may settle its obligation arising out of the exercise of an appreciation right in cash, shares, or in a combination of cash and shares.

Following is a tabulation of data concerning options on Common Shares and appreciation rights for certain directors and officers individually and for all present corporate officers:

	<u>Fred L. Hartley</u>	<u>Claude S. Brinegar</u>	<u>Ray A. Burke</u>	<u>T. C. Henderson</u>	<u>William S. McConnor</u>	<u>Charles F. Parker</u>	<u>All Present Corporate Officers Including Those Named</u>
Common Shares Granted since Jan. 1, 1977							
Number of shares.....	None	None	None	None	None	None	1,380
Exercised since Jan. 1, 1977							
Number of shares.....	None	None	None	None	None	1,440	2,640
Aggregate option value of shares exercised.....						\$ 45,720	\$ 82,695
Aggregate market value of shares on dates exercised...						\$ 68,940	\$130,785
Exercise of appreciation rights since Jan. 1, 1977							
Number of shares.....	None	None	None	None	None	4,410	6,610
Aggregate option value of rights exercised.....						\$135,883	\$203,672
Aggregate market value of shares on dates rights exercised.....						\$240,069	\$359,938
Number of shares issued in partial settlement of appreciation rights.....						956	1,429
Unexercised at June 30, 1978							
Number of shares.....	25,300	2,500	11,408	3,998	8,818	None	67,002
Average per share option price(1).....	\$30.97	\$35.88	\$30.81	\$31.08	\$30.98	—	\$31.63

(1) Represents market value on dates granted.

Performance Share Plan of 1975

Under the shareholder approved Performance Share Plan of 1975, officers and key employees may be awarded in the aggregate a maximum of 130,000 Performance Share Units ("Units"), each equivalent to one share of the Company's Common Stock, during the ten-year period commencing January 1, 1975.

A total of 26,020 Units have been awarded for the first four-year award period ending December 31, 1978, and 21,340 Units have been awarded for the second four-year award period ending December 31, 1980. Awards to certain present directors and officers, including those named in the table on page 40, for the first and second award periods are, respectively: 4,250 Units and 3,350 Units to Mr. Hartley, 1,600 Units and 1,120 Units to Mr. Brinegar, 1,600 Units and 1,120 Units to Mr. Burke, 670 Units and 590 Units to Mr. Henderson, 1,380 Units and 980 Units to Mr. McConnor, 1,640 Units and 0 Units to Mr. Parker. 16,840 Units and 11,110 Units were awarded during the two award periods to all present directors and officers. Mr. Harder is not a participant in this Plan.

The percentage of awards earned and payable for each award period is contingent upon the Company achieving a specified average return on shareholders' equity during the period. Such payments may not exceed by more than 200 percent the fair value of Units (\$36.53 each for the first award period and \$56.35 each for the second award period) at time of grant.

Interests in Certain Transactions

During 1977 and the first half of 1978, the Company purchased instruments and equipment in the ordinary course of business from Beckman Instruments, Inc. at competitive market prices. Such purchases amounted to \$206,000 in the aggregate and it is expected there may be similar transactions in the future.

In January, 1978, Beckman Instruments, Inc. acquired real property located in Brea, California for its fair market value of \$1,544,128 from a wholly-owned subsidiary of the Company. A contract for the sale of additional real property located in Brea was executed by Union's wholly-owned subsidiary and Beckman Instruments, Inc. in late August 1978 at a fair market value of \$2,256,202. The sales prices of said real property were based upon independent appraisals. Union believes that similar prices could have been obtained from nonaffiliates. Dr. Ballhaus, a Director of the Company, is President of Beckman Instruments, Inc.

The Company sold wax in the ordinary course of business to a subsidiary of Di Giorgio Corporation at competitive market prices. Such sales amounted to \$718,000 in the aggregate during 1977 and the first half of 1978 and it is expected there may be similar transactions in the future. The terms of the sales were similar to those that could have been obtained from a nonaffiliate. Mr. Di Giorgio, a Director of the Company, is Chairman and Chief Executive Officer of Di Giorgio Corporation.

Molycorp, Inc. and International Mining Corporation have maintained a joint minerals exploration program for two projects pursuant to an agreement entered into in July 1969. Each party was committed to make contributions based upon an annual budget and had a 50% interest in the program, which was managed by Molycorp. During 1977, Molycorp received reimbursement of \$156,000 from International Mining for its share of expenses. The joint program was terminated in April, 1978 by Molycorp's withdrawing an undivided interest in one project and by purchasing for \$200,000 all of International Mining's interest in the other project.

During 1977, Molycorp, Inc. placed most of its insurance through a wholly-owned subsidiary of Canton Company, which is a wholly-owned subsidiary of International Mining Corporation, and paid \$1,329,000 in premiums during 1977 and the first half of 1978 on which the subsidiary received commissions at regularly established rates. It is expected there will be minimal transactions in the future. Mr. Harder, a Director of the Company, is Chairman and Chief Executive Officer of International Mining Corporation and Chairman of Canton Company.

The Company engaged in transactions with the Los Angeles Dodgers, Inc., in the ordinary course of business, totaling \$1,020,000 during 1977 and the first half of 1978. Such transactions included advertising space rental, broadcast rights and ticket purchases. It is expected there may be similar transactions in the future. Mr. O'Malley, a director of the Company, is President of the Los Angeles Dodgers, Inc.

The Accounting and Auditing Committee of the Board of Directors is presently composed of three non-employee directors — Donald P. Jacobs, Peter O'Malley, and Donn B. Tatum. The firm of Coopers & Lybrand was engaged as independent certified accountants for 1978.

Beneficial Ownership of Voting Securities

Following is the name of the beneficial owner of more than five percent of Union's Common Stock, par value \$8 $\frac{1}{3}$ per share, the only class of voting securities outstanding as of June 30, 1978:

Security Pacific National Bank	2,308,074	5.3%
Trustee for Union Oil Employees		
Profit Sharing Plan		
P.O. Box 2498, Terminal Annex		
Los Angeles, Ca. 90051		

The number of Common shares held by Directors and corporate officers as a group, as of June 30, 1978, is 249,278, which constitutes 0.6% of the class outstanding.

The Trustee for the Union Oil Employees Profit Sharing Plan may acquire additional shares of Union Common Stock with contributions made by Union and voluntary participants in the Plan pursuant to the terms thereof and to the terms of the Trust Agreement between Union and the Trustee. Officers and Directors of Union (excluding non-employee Directors) may acquire additional shares of Union Common Stock upon exercise of stock options and stock appreciation rights, as described herein under the heading "Information Concerning Options on Common Shares" and pursuant to the terms of the Performance Share Plan of 1975, as described herein under that heading.

DESCRIPTION OF COMMON SHARES OF UNION

As of the date of this Proxy Statement, Union has outstanding only Common Shares with a par value of \$8 $\frac{1}{3}$ per share.

A brief summary of the effect of the provisions contained in Union's Articles of Incorporation, as amended, that concern the rights of holders of the Common Shares and of provisions contained in agreements concerning certain of Union's long-term debt which relate to such rights follows:

Dividend Rights: Dividends may, subject to compliance with the limitations referred to below, be declared and paid on outstanding Common Shares out of any assets at the time legally available therefor.

Terms of one of Union's debt agreements place restrictions upon the payment of cash dividends or distribution of assets on any capital shares and the purchase, acquisition or redemption of outstanding capital shares. In addition, they require the maintenance of minimum levels of working capital and debt/equity ratios. The most restrictive of these relate to working capital, which is to be maintained at no less than \$40,000,000.

Voting Rights: Under California law, each holder of Common Shares has cumulative voting rights with respect to the election of directors.

Pre-emptive Rights: The holders of Common Shares have no pre-emptive rights to purchase (a) capital stock issued in exchange for or in payment for property, (b) bonds, debentures or evidences of indebtedness convertible into or having optional rights to purchase capital stock or the capital stock issuable upon exercise of such conversion or optional rights, and (c) Common Shares which may be sold to certain employees (including officers) chosen by the Board of Directors, or issued pursuant to the exercise of options granted to such employees, but not to exceed in the aggregate 1,146,899 Common Shares, such maximum amount being subject to further adjustment in the same manner as Union's outstanding Common Shares in the event of any share dividends or in the event the Common Shares of Union shall be changed into, or exchanged for, a different number or issue of shares of stock or other securities.

Liquidation Rights: Upon dissolution of Union, after it has been determined that all of the claims and obligations of the corporation have been paid or adequately provided for, the assets will be distributed to the holders of Common Stock. There are no existing preferential rights to share in such assets upon dissolution of the corporation.

Other Matters: The Common Shares are not convertible and are not subject to redemption.

All outstanding Common Shares have been issued as fully paid shares and the Articles of Incorporation do not authorize the levy of assessments upon such shares.

BUSINESS AND PROPERTIES OF SILVER BELL

In General:

Silver Bell was organized under Colorado law in 1969 for the purpose of acquiring all of the assets and liabilities of Silver Bell Mines Co., its predecessor. Silver Bell Mines Co. had been organized in 1944 and many of its records have been lost or misplaced.

Since its inception, Silver Bell has been engaged in the acquisition of interests in and to mineral properties and in exploration efforts thereon directly or through partners, lessees, purchasers, and optionees for many types of minerals.

Silver Bell does not engage in mining exploration or development activities on any of its properties at the present time. Most of its properties are either under lease, option, or joint venture with other parties engaged in various exploration efforts.

Silver Bell has four employees, its President, an office secretary, and two employees doing maintenance and assessment work on its properties. Silver Bell maintains offices at 158 Fillmore, Denver, Colorado 80206, and its telephone number is (303) 333-4211.

For the reasons set forth under THE SILVER BELL ACQUISITION — Board of Directors Recommendation, Silver Bell has agreed to sell substantially all of its assets to Minerals. Silver Bell considers Silver Bell's 35% interest in the Sweetwater Project to be its primary asset. Union and Minerals have agreed to acquire substantially all of Silver Bell's assets in order to acquire Silver Bell's 35% interest in the Sweetwater Project described below.

The Sweetwater Project:

In General:

Silver Bell owns a 35% undivided interest and Minerals owns the remaining 65% undivided interest in a joint venture formed to explore for and develop uranium deposits which may be found on unpatented lode mining claims and state leases located in Sweetwater, Fremont and Natrona Counties, Wyoming. Sufficient deposits of uranium have been discovered beneath a portion of the joint venture properties in Sweetwater County to justify opening a surface pit and constructing a mill. The project is referred to as the Sweetwater Project or Sweetwater Mine and Mill.

Mineralization occurs in a number of deposits located within an area of approximately 20,000 feet in length and 3,000 feet in width. The depth to the deposits varies, but generally increases from a few feet at the southern end of the deposits to over 400 feet at the northern end. The uranium ore minerals, principally uranite and some coffinite, occur as pore fillings and grain coating in fine-to-coarse grained sandstones of the upper portion of the Battle Springs Formation.

Minerals currently estimates that proved recoverable reserves of approximately fourteen million pounds of uranium oxide (U_3O_8), using a milling extraction efficiency factor of 91.7%, are located on the Sweetwater Project site. Silver Bell's undivided 35% interest equals approximately 5.0 million pounds. The ore is estimated to have an average grade of 0.048 percent U_3O_8 . Such estimates are based upon about 2,700 test holes that have been logged by radiometric probing, of which approximately four percent were cored and analyzed by chemical methods.

Present plans call for the ore to be recovered by sequential excavation and filling of a series of open pits. If the ore contains more than approximately 0.029 percent uranium oxide, it will be hauled for processing to the mill to be constructed east of the ore body. Material with a grade between 0.029 and 0.01 percent uranium oxide will be hauled to a pad where it will be leached with acidified mine discharge water. Material containing less than 0.01 percent uranium oxide will be deposited in a waste dump or used for back-filling mined-out areas. Based upon present plans, it is anticipated that the estimated proved reserves would be recovered over a period of 15 years.

Assessment of Economic Viability:

Numerous studies of the Sweetwater Project concerning reserve determinations and mining, milling and reclamation plans have been made by Minerals and by consulting firms. Minerals has assessed the results of these studies and based upon current uranium prices and estimated expenses, has concluded that commercial production of uranium will be economically feasible and profitable. However, such conclusion is contingent on a number of uncertainties, including the issuance of required permits in a timely manner, the future price of uranium, capital requirements and operating costs.

The current price of uranium as reported by Nuclear Exchange Corporation as of September 30, 1978 was \$43.25 per pound. If the entire estimated proved recoverable reserve of the Sweetwater Project (14,000,000 pounds) could be sold at such price, the gross value of such reserves would be \$605,500,000 and the gross value of Silver Bell's interest in such reserves would be approximately \$211,925,000. Net profits would, of course, be reduced by the costs of recovery, capital, milling and taxes. There is no assurance that the price of uranium will remain at current levels or, since no commitment has been made for the sale of Silver Bell's share of any uranium produced from the Sweetwater Project, that Silver Bell's share of any production could be sold at that price.

If the price of uranium increases substantially above the current price or if substantial additional reserves of uranium prove to be recoverable through the in situ leaching process described below, Silver Bell's interest in the Sweetwater Project would tend to increase in value. Conversely, a decline in uranium prices, material delays in the permitting process and in the production schedule or tax or cost increases would tend to decrease the value of Silver Bell's interest. For example, Minerals' assessment of the economic viability of the Sweetwater Project was made before the federal Nuclear Regulatory Commission ("NRC") required that tailing produced by mining operations be buried. While detailed plans for burial are not yet complete, such a requirement will impose substantial additional costs for tailing disposal. Recent delays in obtaining a Permit to Mine indicate that commercial production could start no earlier than early 1980. See "Environmental Matters".

Minerals has advanced all funds expended for development of the Sweetwater Project to date. If the Silver Bell Acquisition is not completed, Minerals anticipates that funds will continue to be advanced. Minerals will recover such advances, plus 10% interest on the unpaid balance of such advances, from 90% of Silver Bell's 35% share of production only if production commences. See "The Operating Agreement". Based upon current estimates made by Minerals, Minerals may not obtain full repayment of advances before late 1984, assuming that commercial production commences in 1980.

Environmental Matters:

Prior to commencement of operations at the Sweetwater Mine and Mill, Minerals must obtain a Permit to Mine from the Wyoming Department of Environmental Quality ("DEQ") to assure that mining operations conform to a state approved reclamation plan in accordance with the Wyoming Environmental Quality Act, and a Source Material License from the NRC to possess, use, transfer and deliver source material for uranium milling or other activity which will significantly affect the quality of the environment. The other major permits required for the Sweetwater Project have been issued. Regular review, monitoring and inspections will be required for operations under both the Permit to Mine and the Source Material License. The DEQ will require a reclamation performance bond of over \$10,000,000 on the Sweetwater Project for the first year of operation. On May 1, 1978, a year and a half after Minerals' initial filing of the Application for a Permit to Mine with the DEQ, the Wyoming Outdoor Council, a private group, objected to the issuance of the Permit to Mine for alleged failure to complete the Application and to comply with the Wyoming Environmental Quality Act. Wyoming law requires an evidentiary hearing before the Wyoming Environmental Quality Council ("EQC") for all contested applications. On May 10, 1978 (after the hearing process had commenced) the NRC ordered a change in the method of tailing disposal; all disposal pits were required to be below ground. On July 12, 1978 the EQC reviewed the disposal plan and ruled that the modification was a

"significant change". The EQC dismissed Minerals' Application. Minerals has submitted the tailing disposal modification to DEQ. As soon as the modification is reviewed, the entire application will be republished and reviewed in an evidentiary hearing. Minerals and Silver Bell anticipate that the hearing will be held in late October, 1978. Minerals and Silver Bell are also considering a concurrent appeal of the EQC decision to the courts. If Minerals and Silver Bell do not obtain a Permit to Mine from the DEQ, the denial will be appealed. The Sweetwater Project will be terminated if all appeals fail. Silver Bell will not be obligated to repay outstanding advances of approximately \$12,000,000 to Minerals if the Project is terminated.

Application to the NRC was made for a Source Material License in 1976 and a Draft Environmental Statement (NUREG-0403) was issued by the NRC in December 1977. On May 10, 1978, Minerals agreed to ultimately bury all tailing and heap leach residues in pits below ground level to satisfy NRC requirements for long-term stabilization of tailing. Minerals has been informed by the NRC that the NRC is satisfied with its Application for a Source Material License. The NRC has indicated that it will either issue the License subject to state issuance of the Permit to Mine or will furnish Minerals with a letter stating that the License will be issued as soon as the state issues the Permit to Mine.

Other Joint Venture Properties:

The joint venture properties in Sweetwater County have not been completely explored. Current exploration drilling indicates substantial additional mineralization exists throughout the area, but the degree to which any of these mineralized areas will contain commercially mineable deposits cannot be determined at this time.

In Situ Leaching Potential:

In the summer of 1975, Minerals and Silver Bell initiated tests of a process for leaching uranium from the joint venture properties in Sweetwater County by injecting chemical solutions into holes drilled into the formation. The injected fluids flow back from other holes and dissolved uranium is subsequently recovered in ion exchange columns. Extensive plugging of the formation, probably from products of corrosion and/or swelling of clays, terminated the initial "in situ leaching" test with recovery of less than 500 pounds of U_3O_8 in the form of a precipitated slurry. New tests were started in August 1976, injecting chemical solutions into two patterns of four holes each spaced 50 feet apart with a single producing hole in the center of each pattern. Three additional holes on 50-foot centers were completed on one pattern in June 1977. The combined production from both patterns fluctuated from five to 28 pounds per day from August 1976 through March 1978, during which time some of the injection holes were changed to production, and several combinations of oxidants and leaching fluids were tested. Cumulative production through March 1978 was less than 8,000 pounds of U_3O_8 .

On March 28, 1978, all holes were put on production in an attempt to demonstrate that all of the injected chemicals could be recovered from the formation fluids to meet regulatory agencies' requirements for restoration of the quality of the ground water. By May 1978, although the concentration of injected chemicals appeared to be substantially reduced, uranium production continued to be approximately ten pounds of U_3O_8 per day. The demonstrated ability to recover chemicals injected into the formations and to restore ground water quality is required before permits to conduct more extensive in situ leaching tests will be issued.

Minerals deems the test results to be sufficiently favorable to propose a larger test which is designed to determine if in situ uranium leaching is commercially feasible for uranium deposits that are not suitable for open-pit operations. There are numerous occurrences of such uranium deposits on the Project property that, in the opinion of Minerals and Silver Bell, may yield significant commercial values if in situ leaching proves successful. The uncertainty of technical feasibility, particularly the ability to restore ground waters and the economics of a commercial-scale plant, preclude estimates of the value of in situ leaching potential with any degree of precision.

The Operating Agreement:

Minerals and Silver Bell (as successor in interest to certain other corporations) are parties to an Operating Agreement dated May 9, 1969 (the "Operating Agreement"), relating to the exploration for, and development and production of, uranium and other ores from certain mining claims and leases located in Sweetwater, Fremont and Natrona Counties, Wyoming (the "Lands"). The Sweetwater Project is subject to the Operating Agreement. Certain provisions of the Operating Agreement are summarized below.

Pursuant to the Operating Agreement, Silver Bell's share of the costs of construction of mining and milling facilities and any burdens and taxes accruing on the ores produced from the property have been advanced by Minerals and are expected to be recouped from 90% of Silver Bell's share of production from the Lands or the proceeds therefrom in the event that the Acquisition is not completed. Interest accrues on unpaid advances at the rate of 10% per annum. The amount of such advances, plus interest, presently outstanding is approximately \$12 million. If the Silver Bell Acquisition is completed, Minerals will acquire the assets subject to the outstanding advances. Silver Bell is not obligated to repay advances if production does not commence.

As Operator under the Operating Agreement, Minerals exercises exclusive control and supervision of the real and personal property which is subject to the Operating Agreement. Silver Bell has certain approval rights relating to work programs and annual budgets proposed by Minerals.

A majority of the members of a Technical Committee comprised of three representatives of Minerals and two representatives of Silver Bell has the right to approve exploration and development plans and certain other matters relating to the joint operation of the properties.

Silver Bell has the right of access to the properties, together with the right to inspect all drilling data, samples, cores, logs and all other data pertaining to the properties obtained by Minerals while conducting the Project.

In the event that any party acquires or proposes to acquire additional lands or mineral rights located in lands located within five miles of the Lands (the "Area of Interest") for purposes related to exploration or mining activities, the non-acquiring party has the right to participate in the ownership of such properties in proportion to its interest in the Project at the time of the acquisition of said property.

Minerals recently considered the acquisition of an interest in certain unpatented uranium mining claims adjoining the Lands and within the Area of Interest. Negotiations were suspended pending reconsideration of the effect of the Wyoming DEQ's denial of Application for a Permit to Mine. See: "Environmental Matters". If Silver Bell is not acquired by Minerals and purchase negotiations are reinstated, Silver Bell will have the right to participate in the purchase price and the ownership of, and any production from, this property in accordance with the terms of the Operating Agreement and will retain its present royalty interest therein.

A party's entire undivided interest in the Lands may be assigned; provided that the other party has a right of first refusal to purchase the interest of the withdrawing party. No such preferential right to acquire additional lands or mineral rights arises in the event of disposition of a party's entire interest by merger, reorganization, consolidation or sale of all of its assets. Properties may also be withdrawn from the Project under certain conditions, subject to the rights of parties to retain their interests in the withdrawn properties. Parties may withdraw from the Operating Agreement upon termination of their interest in the Lands, including interests in the Sweetwater Project.

The term of the Operating Agreement extends during the term of any mining claim or lease which is subject to the Operating Agreement or for as long as minerals can be mined commercially from any of the claims included under the Operating Agreement, whichever is longer.

Other Properties:

Silver Bell has no knowledge of any commercially mineable deposits on any of its properties, other than the Sweetwater Project.

Following is a brief description of the mineral property interests held by Silver Bell as of June 30, 1978, divided into eleven groups in three states.

WYOMING:

1. CLAIMS IN MINERALS EXPLORATION COMPANY JOINT VENTURE (SEE "THE SWEETWATER PROJECT" ABOVE).
2. CLAIMS WHICH ARE THE SUBJECT OF TRANSACTIONS WITH JOHN S. WOLD.
3. CLAIMS SUBJECT TO A LEASE AGREEMENT WITH UNION CARBIDE CORPORATION.
4. AGREEMENT BY KERR-McGEE CORPORATION TO ACQUIRE CLAIMS.
5. OVERRIDING ROYALTY ACQUIRED FROM DEAN L. ZOBEL.

COLORADO:

1. CLAIMS SUBJECT TO A PURCHASE AND SELL AGREEMENT ASSIGNED TO PIONEER URAVAN, INC.
2. MINING DEED TO C. W. BUNKER PLACED IN ESCROW BY SILVER BELL ON CLAIMS LOCATED IN MONTROSE COUNTY, COLORADO.
3. MARSHALL PASS UNPATENTED MINING CLAIMS, SAGUACHE COUNTY, COLORADO, DEEDED TO HOMESTAKE MINING COMPANY.
4. (a) SAN MIGUEL COUNTY, COLORADO, PROPERTIES, AND (b) CLAIMS AND LEASES WHICH ARE BEING ACQUIRED FROM F. W. BAUMGARTNER.
5. THE AGREEMENT OF SILVER BELL TO ACQUIRE ALL THE ASSETS OF THE MANCOS CORPORATION IN EXCHANGE FOR STOCK OF SILVER BELL AND RECENT EVENTS CONCERNING THAT AGREEMENT.

UTAH:

1. LEASE ON FEE LAND FROM W. T. KNUCKLES ASSIGNED BY SILVER BELL TO UNION CARBIDE CORPORATION.

A description of each of the above properties in greater detail follows:

WYOMING PROPERTIES (excluding the Sweetwater Project)

CLAIMS WHICH ARE THE SUBJECT OF TRANSACTIONS WITH JOHN S. WOLD

	No. of Unpatented Mining Claims (More or Less)	Location of Claims (County and State)	Claim Group	Approximate Acreage	Interest
1.	27	Sweetwater, Wyo.	JOY	540	4½ %
	445	Sweetwater, Wyo.	KAY	8,900	yellow cake royalty
2.	613	Sweetwater and Fremont, Wyo.	M-D to Red	10,530	4½ % yellow cake royalty

	No. of Unpatented Mining Claims (More or Less)	Location of Claims (County and State)	Claim Group	Approximate Acreage	Interest
3.	169	Carbon, Wyo.	AB	3,380	3½ % yellow cake royalty
	195	Natrona, Wyo.	Pork Chop	4,340	3½ % yellow cake royalty
	86	Carbon, Wyo.	Oro to PatS	1,720	3½ % yellow cake royalty
4.	102	Sweetwater, Wyo.	SUL	2,040	4½ % yellow cake royalty
	146	Sweetwater, Wyo.	LEE	2,920	4½ % yellow cake royalty

1. On August 28, 1975, Silver Bell entered into an Agreement for Mining Deed (with Mining Deed attached and delivered therewith) with John S. Wold of Casper, Wyoming, under which it sold all of its right, title, and interest in the JOY and the KAY claims subject to the reserved yellow cake royalty. The \$30,000 consideration has been paid.
2. Again on August 28, 1975, Silver Bell entered into a second Agreement for Mining Deed (with a Mining Deed attached and delivered therewith) with John S. Wold under which it sold all of its right, title, and interest in claims described after 2 above subject to the reserved yellow cake royalty. The \$20,000 consideration has been paid.
3. On November 1, 1975, Silver Bell gave a Special Warranty Mining Deed to John S. Wold conveying to him the claims described after 3 above subject to the reserved yellow cake royalty. The annual advance royalties of \$100,000 were paid on or before November 1, 1976, and 1977, respectively. Under terms set forth in the deed, the annual advance royalty is reduced to \$75,000 in 1978 and is to remain at that figure until the grantee shall produce uranium commercially from the claims.
4. On September 1, 1977, Silver Bell gave a Mining Deed to John S. Wold, conveying to him the 248 claims described after 4 above.

CLAIMS SUBJECT TO A LEASE AGREEMENT WITH UNION CARBIDE CORPORATION

No. of Unpatented Mining Claims (More or Less)	Location of Claims (County and State)	Claim Group	Approximate Acreage	Interest
80	Sweetwater, Wyo.	Jab	1,600	} 10% or minimum annual advance royalty
4	Sweetwater, Wyo.	DW	80	
4	Sweetwater, Wyo.	EQ	80	

Union Carbide holds only the above described 88 claims under a Lease Agreement dated May 16, 1972. The lessee makes minimum annual royalty payments described in the lease. These payments are current. Royalty on crude ore is to be 10% less penalties, taxes, handling, and transportation costs. In the event the lessee produces uranium compounds for sale, the royalty is to be based on a table in the agreement.

AGREEMENT BY KERR-McGEE CORPORATION TO ACQUIRE CLAIMS

<u>No. of Unpatented Mining Claims (More or Less)</u>	<u>Location of Claims (County and State)</u>	<u>Claim Group</u>	<u>Approximate Acreage</u>	<u>Interest</u>
52 (50%)	Sweetwater, Wyo.	ROSS	1,400	8% raw ore royalty
16 (50%)	Sweetwater, Wyo.	ROX	320	4% to 5% processed ore royalty

On July 6, 1973, Kerr-McGee Corporation ("Kerr-McGee") entered into an agreement with Silver Bell and persons from whom Silver Bell was acquiring claims to purchase their 50% interest in 1,394 claims in Fremont and Sweetwater Counties, Wyoming. Part of the claims were transferred to Amax Uranium Corporation by Kerr-McGee on April 1, 1974, on which date Kerr-McGee informed Silver Bell that the only claims it would retain under the agreement were the ROSS and the ROX claims. Amax surrendered the other claims deeded to it to Silver Bell on July 18, 1974.

OVERRIDING ROYALTY ACQUIRED FROM DEAN L. ZOBEL

<u>No. of Unpatented Mining Claims (More or Less)</u>	<u>Location of Claims (County and State)</u>	<u>Claim Group</u>	<u>Approximate Acreage</u>	<u>Interest</u>
75	Sweetwater and Fremont, Wyo.	LEE	1,500	5% ORR

Silver Bell acquired the above described overriding royalty interest through an Option and Purchase Contract with Mr. and Mrs. Dean L. Zobel, dated April 26, 1972, which required Silver Bell to make an aggregate payment of \$32,500, commencing with the down payment of \$2,000 and continuing with payments of \$1,000 per month thereafter until paid. The purchase price has been paid.

At the time of the acquisition of the overriding royalty interest, the property was owned by Nuclear Exploration and Development Company. The working interest is now owned by Pacific Power and Light Company.

Colorado Properties:

CLAIMS SUBJECT TO A PURCHASE AND SELL AGREEMENT ASSIGNED TO PIONEER URAVAN, INC.

<u>No. of Unpatented Mining Claims (More or Less)</u>	<u>Location of Claims (County and State)</u>	<u>Claim Group</u>	<u>Approximate Acreage</u>	<u>Interest</u>
235	San Miguel, Colo.	Bull & Hamm Canyon Group	4,700	10% royalty until \$1 million end price is paid
42	Montrose, Colo.	Club Basin Gil Max Eagle Uravan	900	

The above claims are subject to a Purchase and Sell Agreement entered into on March 31, 1973, by Silver Bell with John I. Schumacher, dba Strategic Minerals Exploration Co. ("Strategic"). The agreement was later assigned to Pioneer Uravan, Inc. ("Pioneer"), a wholly-owned subsidiary of Pioneer

Corporation. Strategic paid \$15,000 in cash and agreed to pay \$1,000,000 from royalties of 8% of net receipts from March 31, 1973, to March 31, 1974, and thereafter 10%. The total purchase price is to be reduced by \$4,000 for each claim surrendered, or as to which title is later found to be inadequate, down to but not below \$500,000. The assignee is paying all taxes and is filing Affidavits of Labor. After March 31, 1976, it became obligated to perform 1,000 man hours of work per month during periods when ores can be marketed from the claims at a profit. The properties are being mined by Pioneer and royalties are being received by Silver Bell.

**MINING DEED TO C. W. BUNKER PLACED IN ESCROW BY SILVER BELL
ON CLAIMS LOCATED IN MONTROSE COUNTY, COLORADO**

<u>No. of Unpatented Mining Claims (More or Less)</u>	<u>Location of Claims (County and State)</u>	<u>Claim Group</u>	<u>Approximate Acreage</u>	<u>Interest</u>
37	Montrose, Colo.	Cantankerous Lion Creek to Soldier Boy	740	4½ % 7½ % until the \$235,000 end price is paid

In March, 1973, Silver Bell executed and placed in escrow a Mining Deed to C. W. Bunker ("Bunker") on the above described claims in Montrose County, Colorado.

Royalties on gross proceeds from all claims, except seven, are 7½ % and on the seven claims are 4½ % until aggregate royalty payments reach \$235,000, at which time the Escrow Agent is to deliver the Mining Deed to Bunker. Bunker pays all taxes on the property, does all required assessment work, and files necessary Affidavits of Labor thereon. Within each 90-day period, at least 60-man shifts must be worked or the cost equivalent must be spent on the property.

The accumulated total of all royalty payments to February 7, 1978, is \$34,228.29.

**MARSHALL PASS UNPATENTED MINING CLAIMS,
SAGUACHE COUNTY, COLORADO, DEEDED TO HOMESTAKE MINING COMPANY**

<u>No. of Unpatented Mining Claims (More or Less)</u>	<u>Location of Claims (County and State)</u>	<u>Claim Group</u>	<u>Approximate Acreage</u>	<u>Interest</u>
97	Saguache, Colo.	Sarge Snowshoe Maybelle Blitz F & F	1,940	9½ % or scheduled royalty

Silver Bell gave a Deed to Homestake Mining Company on October 15, 1975. Silver Bell has a 9½ % Mine Value per dry ton royalty, 7½ % of which is shifted to a Schedule in the event of processing by Homestake. Silver Bell has no interest in the property at this time other than the royalty interests described in the tabulation.

SAN MIGUEL COUNTY, PROPERTIES

(Excluding F. W. Baumgartner Properties which are separately explained later)

No. of Mining Claims (More or Less)			
	Unpatented	Claim Group	Approximate Acreage
1.	42	Butterfly Group	305
2.	28	Monarch Group	293
3.	11	Clagget Group	110
4.	9	Carbonero Group	80
5.	3	Tip Top 5, 6, 9	62
6.	29	Silver Bell Group	307
7.	7	Noyes Group	131
8.	29	Risser Group	*
Total	158 Claims		1,288 acres

* The 29 claims in the Risser Group overlie the Ruth Group of claims described below. Accordingly, no additional acreage accrues to Silver Bell as a result of owning this group of claims.

<u>Patented</u>			
1.	3	Monarch	20.210
2.	14	Carribeau	115.657
3.	$4\frac{15}{16}$	Oberto	40.779
4.	4	Silver Mountain	35.185
5.	10	Carbonero	110.795
6.	$6\frac{1}{4}$	Pickett	49.592
7.	$\frac{1}{4}$	Davis	2.314
Total	41 full claims		
	3 partial claims		374.532 acres

The above claims are not subject to lease or purchase agreements with others.

CLAIMS AND LEASES IN SAN MIGUEL COUNTY, COLORADO WHICH ARE BEING ACQUIRED FROM F. W. BAUMGARTNER

No. of Mining Claims (More or Less)			
Unpatented		Claim Group	Approximate Acreage
37		Ruth	497.92
93		Ophir	960.31
8		Black Jack	103.48
5		Arrow Head	93.35
Patented			
1		M.S. #16,473 New Dominion	10.331
¼ (undivided)		M.S. # 16,654 Attica	2.314
1		M.S. #16,421 Marie Antoinette	10.183
1		M.S. #12,716 Star Light	10.330

The described claims and others described below were the subject of a Purchase Agreement between Silver Bell and F. W. Baumgartner dated May 30, 1970, which together with attached Mining Deeds With Special Warranty and Assignments of Mining Lease is in escrow pursuant to an Escrow Agreement which provides for delivery of the deeds and assignments to Silver Bell on completion of payments. The purchase price agreed upon was \$200,000, payable \$10,000 per year through November 30, 1975, and \$20,000 per year thereafter. Payments are current through November 30, 1977, leaving a remaining balance of \$100,000.

The Pollman and the Belisle Mining Leases are part of the above transaction. Silver Bell assumed the obligation of F. W. Baumgartner to pay Mr. Belisle \$200 per month, which has been paid through November, 1978, and to pay Mr. Pollman \$100 a month, which has been paid through November, 1978. The balance of future option payments due under these leases as of November 30, 1978, was \$75,100.

THE AGREEMENT OF SILVER BELL TO ACQUIRE ALL OF THE ASSETS OF THE MANCOS CORPORATION IN EXCHANGE FOR STOCK OF SILVER BELL AND RECENT EVENTS CONCERNING THAT AGREEMENT

Silver Bell entered into an Interim Agreement with The Mancos Corporation ("Mancos"), dated September 6, 1973, to acquire all the assets of Mancos in exchange for stock of Silver Bell. On June 19, 1978, Silver Bell and Mancos entered into a Conditional Release of their obligations to each other under the Interim Agreement, which release is conditioned on the acquisition of the assets of Mancos by Minerals in exchange for 6,905 shares of Union Common Stock under and pursuant to an agreement between them.

The property of Mancos consists of 12 patented claims, which contain approximately 240 acres, and 35 unpatented claims, which contain approximately 700 acres, and 2 unpatented mill sites, which contain approximately 6 acres, together with 4 buildings and attached and unattached mill equipment. A lease on 6 patented placer claims is also owned by Mancos. All of the property is located in Montezuma County, Colorado. There are no known commercially mineable ore bodies on any of the properties. Silver Bell has no information on the properties.

The consummation of the Union-Minerals-Silver Bell agreement is a condition precedent to the consummation of the Union-Minerals-Mancos agreement. If the other agreement cannot be consummated, the Interim Agreement with Silver Bell will be reinstated.

UTAH PROPERTIES

Lease on Fee Land from W. T. Knuckles Assigned by Silver Bell To Union Carbide Corporation.

<u>Lease</u>	<u>Location (County and State)</u>	<u>Type of Interest</u>	<u>Approximate Acreage</u>	<u>Interest</u>
W. T. Knuckles	San Juan, Utah	Fee	920	3%

On October 5, 1971, Silver Bell assigned, transferred, and conveyed to Union Carbide Corporation a lease which it acquired on April 7, 1966, from W. T. Knuckles. Under the lease, Union Carbide Corporation has assumed the obligation of paying the minimum royalty of \$1,000 a month to Mr. Knuckles and, in addition, paid a minimum royalty of \$500 a month to Silver Bell to December 31, 1974. As additional consideration for the assignment, Union Carbide Corporation agreed to pay to Silver Bell an overriding royalty of 3% on all minerals produced and sold from the property to December 31, 1979, at which time the royalty is to advance to 5%.

MANAGEMENT AND CONTROL OF SILVER BELL

Officers and Directors

Information concerning Silver Bell's officers and directors, their principal occupations, periods of service, and shareholdings follows:

Name and Other Positions With Silver Bell	Present Principal Occupation and Occupation During Past Five Years	Period of Service as a Director	Shares of Silver Bell Owned Beneficially on 9/30/1978*
John W. Metzger Age: 63	For more than 5 years he has been engaged in the practice of law in Denver, Colorado.	10/30/1969 to date	12,000
Eugene J. Nord Vice President Age: 76	For more than 5 years he has been engaged in the real estate and insurance business in Milwaukee, Wisconsin.	10/30/1969 to date	61,757
Eugene H. Sanders President and Treasurer Age: 71	From 1966 through October 30, 1969, he was President of Silver Bell Mines Co.; from October 30, 1969, to February 15, 1972, he was President, Treasurer, and a director; from February 15, 1972, he was Chairman of the Board, Chief Executive Officer, Treasurer, and a director; and from February 11, 1977, he has been President, Treasurer, and a director.	10/30/1969 to date	515,766
William K. Somerville Executive Vice President and Secretary Age: 60	For the past 5 years he has been employed by the State of Colorado as a Senior Electrical Engineer. For the first 3 years he was with the Department of Public Works and for the last two years he has been with the Department of Planning and Budget.	9/10/1976 to date	65,630
Leland A. Whiles Age: 65	For more than 5 years until March 1, 1975, he was employed as a real estate salesman by Anthony Sweetman, Realtor, Inc., Denver, Colorado. Since March 1, 1975, he has been employed by Dickinson Realty, Aurora, Colorado.	10/30/1969 to date	12,822

* Includes all shares owned beneficially by family corporations, wives and other relatives having the same home as directors.

No family relationship exists between directors.

None of the directors have been the subject of any securities injunctive or criminal case or of any administrative decision involving securities law violations.

Remuneration

The Board of Directors of Silver Bell took action in December of 1976 to authorize a salary of \$30,000 for Mr. Stephen L. R. McNichols (an officer and a director at that time) for the period from April 1, 1976, to March 31, 1977, and a bonus of \$150,000 to Mr. Sanders, \$75,000 of which was applied to the period from April 1 to December 31, 1976, and the remaining \$75,000 was

to be applied to the calendar year 1977, of which \$18,750 was to be apportioned to the first quarter and the balance to the remaining three quarters of the year. Under and pursuant to that action of the Board of Directors, Mr. Sanders received the balance of \$56,250 for the first three quarters of the fiscal year which commenced on April 1, 1977. On March 16, 1978, Mr. Sanders was voted a salary of \$50,000 to cover the period from January 1, 1978, to July 1, 1978. That amount has been paid. Of this amount, \$21,400 has been charged to expense in fiscal 1978 for the period January 1, 1978, to March 31, 1978, and the remainder of \$28,600 has been reported as prepaid officer's bonus on the March 31, 1978 balance sheet. Additionally, Silver Bell paid the remaining \$25,000 of the salary voted to Mr. McNichols during the last quarter of the April 1, 1977, to March 31, 1978 fiscal year. Except for directors' fees paid to four directors, totaling \$4,100, the described amounts constitute the total payments to officers and directors as a group during the fiscal year ended March 31, 1978.

Stock options were extended from a termination date of September 30, 1977, to March 15, 1978, in consideration of the receipt of \$25,000 from three persons; including Eugene H. Sanders, with the understanding that if the remaining options which were extended were not exercised by March 15, 1978, the payments made by the three persons would be retained by Silver Bell as and for consideration for the extension of the options but in the event that the remaining options were exercised in full on or before the March 15, 1978, expiration date the consideration would be recognized by Silver Bell as a portion of the consideration for the exercise of the options. All options were exercised by the expiration date. Mr. Sanders' portion of the consideration paid for extension of the options was \$5,000. On March 10, 1978, he exercised his option to acquire 19,500 shares, paying an additional \$14,500 for a total of \$1.00 per share. The stock of Silver Bell ranged from a low of \$1.38 to a high of \$2.13 bid and a low of \$1.63 to a high of \$2.38 asked in the over-the-counter market during the period from April 1, 1977, to March 31, 1978. On the date Mr. Sanders exercised his option, the stock was quoted at \$2.13 bid, \$2.38 asked.

Principal Stockholders

The only persons known to own of record and/or beneficially 5% or more of Silver Bell's outstanding common stock as of July 31, 1978, and the ownership of all officers and directors as of that date were as follows:

<u>Name and Address</u>	<u>Number of Shares</u>	<u>Percent of Class</u>
Consolidated Oil & Gas, Inc. Suite 1300, Lincoln Tower Building, 1860 Lincoln Street, Denver, Colorado 80295	850,342*	11.23
Eugene H. Sanders 158 Fillmore, Denver, Colorado 80206	515,766	6.8
Ralph Schauss 844 East 20th Street, Casper, Wyoming 82601	516,214	6.8
Officers and directors as a group (5 persons)	667,975	8.82

* Consolidated Oil & Gas, Inc. has 4,719,697 shares of its stock outstanding, of which an aggregate of 341,414 shares (7.2%) are owned by its officers and directors as a group. No person owns as much as 5% of the outstanding stock.

Certain Transactions

On June 30, 1976, Silver Bell sold 24.5 acres of uncultivated agricultural land in Adams County, Colorado, to Mr. Sanders for an aggregate consideration of \$196,000, of which \$100,000 was paid down and the balance was evidenced by a Promissory Note secured by a Deed of Trust. The terms of the transaction were no less favorable to Silver Bell than terms that could have been obtained from a non-affiliate. As of March 16, 1978, \$50,000 had been paid on the Promissory Note. The balance of \$46,000, plus accrued interest of \$1,261.54, was paid on August 4, 1978.

BUSINESS AND PROPERTIES OF MANCOS

In General:

Mancos was organized under Colorado law on April 22, 1970 as a result of the reorganization of U.S. No-Joint Concrete Pipe Company, First National Oil and Minerals Corporation, Red Arrow Gold Corporation, and The Mancos Corporation. After receiving stock of Mancos in exchange for their respective assets, the three selling corporations declared liquidating dividends and were dissolved. Mancos has not engaged in active business at any time from the time of its incorporation to the present time and, accordingly, has had no production from its properties, which consist of 12 patented mining claims containing approximately 240 acres, 35 unpatented mining claims containing approximately 700 acres, 2 unpatented mill sites containing approximately 4 acres, and 4 buildings and various mill equipment. The mill, which was on the property of Red Arrow Gold Corporation at the time of the corporate combination, is in considerable disrepair. There are no known commercially mineable ore bodies on any of the properties.

Mancos has no full time employees. Its offices are maintained at Rocky Ford, Colorado and its telephone number is (303) 254-7464.

Silver Bell-Mancos Transaction:

Mancos and Silver Bell entered into an Interim Agreement on September 6, 1973 pursuant to which Silver Bell agreed to acquire substantially all of Mancos' assets in exchange for 125,000 Silver Bell shares. Silver Bell, Union and Minerals subsequently agreed that Minerals would acquire substantially all of Silver Bell's assets in exchange for 425,000 shares of Union Common Stock. At Silver Bell's request, Minerals subsequently agreed to acquire Mancos' assets directly for 6,905 shares of Union Common Stock, the number of Union Common shares for which 125,000 Silver Bell shares would have been exchanged had the Silver Bell-Mancos transaction been completed. The number of shares for which Silver Bell's assets are to be exchanged was reduced to 418,095. Union and Minerals have no interest in acquiring Mancos' assets but agreed to do so in order to discharge Silver Bell's obligation under the Interim Agreement.

Silver Bell and Mancos executed a Conditional Release on June 19, 1978 pursuant to which the Interim Agreement between Silver Bell and Mancos was suspended. If the Union-Minerals-Silver Bell transaction is not completed, the Interim Agreement between Silver Bell and Mancos will be reinstated. See THE SILVER BELL ACQUISITION — The Silver Bell-Mancos Transaction and THE MANCOS ACQUISITION — Board of Directors Recommendation.

Silver Bell issued a promissory note in the aggregate principal amount of \$50,000 to Mancos on September 6, 1973, which promissory note bears interest at 7% per annum and is unsecured. The maturity date of the promissory note has been extended from May 31, 1978 to May 31, 1979. If the Union-Minerals-Silver Bell acquisition is completed, Minerals will assume this obligation. If both the Union-Minerals-Silver Bell and Union-Minerals-Mancos acquisitions are completed, the promissory note will be cancelled.

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MANAGEMENT AND CONTROL OF MANCOS

Officers and Directors

Information concerning Mancos' officers and directors, their principal occupations, periods of service, and shareholdings follows:

<u>Name and Other Positions With Mancos</u>	<u>Present Principal Occupation and Occupation During Past Five Years</u>	<u>Period of Service as a Director</u>	<u>Shares of Mancos Owned Beneficially on July 31, 1978 (1)</u>
Earl J. Brubaker Age 56	President of Mancos; founder and owner of Valco., Inc., a supplier of concrete products in Pueblo, Canon City, Rocky Ford, and Lamar, Colorado.	1970 to present	510,500
Frank Jobe Age 53	Secretary of Mancos; formerly Vice President of Valco, Inc., for eleven years; presently consultant to Moreland Implement Company, Rocky Ford, Colorado.	1970 to present	10,000
Clyde B. Young Age 69	Vice President of Mancos. He has been retired for more than the past five years.	1971 to present	10,000

(1) Includes all shares owned beneficially by wives and other relatives having the same home as the directors.

No family relationship exists between directors.

Remuneration:

The officers and directors of Mancos have received no remuneration in such capacities or otherwise during the past three years.

Principal Stockholders:

The only persons known to own of record and/or beneficially 5% or more of Mancos' outstanding common stock as of July 15, 1978, and the ownership of all officers and directors as of that date were as follows:

<u>Name</u>	<u>Number of Shares</u>	<u>Percent of Class</u>
Earl J. Brubaker	510,500	28.92%
Don H. Peaker	147,564	8.36%
George W. Gilmore, Jr.	106,780	6.04%
Norma G. Donnell	102,000	5.77%
Officers and Directors as a Group	530,500	30.05%

Certain Transactions:

Earl J. Brubaker issued a promissory note in the principal amount of \$30,000 bearing interest at the rate of 7% per annum in Mancos' favor shortly after the reorganization of Mancos, U.S. No-Joint Concrete Pipe Company, First National Oil and Minerals Corporation and Red Arrow Gold Corporation in 1970. The maturity date of the promissory note has been extended to November 29, 1978 but the note will be repaid prior to maturity, if necessary, in order to provide funds for Mancos to meet its cash needs in connection with the Mancos Acquisition. The terms of the transaction were no less favorable to Mancos than terms which it could have obtained from a non-affiliate.

LEGAL OPINION

George C. Bond, Esq., Vice President and General Counsel of Union, has rendered an opinion, filed as an exhibit to the Registration Statement referred to below, with respect to the valid issuance of the Union Common Stock to be issued pursuant to the Silver Bell and Mancos Acquisitions. Mr. Bond owns beneficially 1,801 shares of Union Common Stock and directly holds options to purchase 1,612 shares of such stock.

EXPERTS

The financial statements of Union and subsidiaries as of December 31, 1977 and for the five years ended December 31, 1977 are included herein in reliance upon the report of Coopers & Lybrand, independent certified public accountants, dated February 14, 1978, and upon the authority of that firm as experts.

The financial statements of Silver Bell as of March 31, 1978 and for the three years ended March 31, 1978 are included herein in reliance upon the report of Coopers & Lybrand, independent public accountants, dated June 19, 1978, and upon the authority of that firm as experts.

Grimsley, White and Company have not expressed an opinion on the balance sheet of Mancos as of December 31, 1977, 1976 and 1975 or on the related statements of operations, accumulated deficit and changes in financial position for the years then ended.

OTHER MATTERS

Neither the management of Silver Bell nor the management of Mancos knows of matters other than those listed in the accompanying Notices of Meeting which might be brought before the respective meetings. However, if any other matters not now known come before either meeting, the persons named in the accompanying proxies of Silver Bell and Mancos will vote such proxies in accordance with their best judgment on such matters.

MISCELLANEOUS

The information in this Joint Proxy Statement with respect to Union has been furnished by Union. The information in this Joint Proxy Statement relating to Silver Bell and Mancos has been furnished by Silver Bell and Mancos with the exception of the information included under the captions BUSINESS AND PROPERTIES OF SILVER BELL — The Sweetwater Project, Other Joint Venture Properties, In Situ Leaching Potential and The Operating Agreement which has been furnished by Minerals.

Management of Silver Bell and Mancos may use the services of their respective Directors, officers and other employees to solicit proxies, personally or by telephone or telegraph. Arrangements will be made with brokerage houses and other custodians, nominees and fiduciaries to forward solicitation material to the beneficial owners of the shares of Common Stock held of record by such persons, and Silver Bell and Mancos will reimburse them for reasonable out-of-pocket expenses incurred by them in so doing.

REGISTRATION STATEMENT AND OTHER AVAILABLE INFORMATION

Union has filed with the Securities and Exchange Commission, Washington, D.C., a Registration Statement under the Securities Act of 1933 with respect to the Union Common Stock to be distributed to stockholders of Silver Bell and Mancos pursuant to the Silver Bell and Mancos Acquisitions. The Registration Statement consists of this Joint Proxy Statement and certain additional information specified by Rules and Regulations of the Securities and Exchange Commission. The latter information may be obtained from the Commission's office in Washington, D.C.

No person is authorized to give any information or make any representation not contained in this Joint Proxy Statement in connection with the distribution of Union Common Stock pursuant to the Silver Bell and Mancos Acquisition and, if given or made, such information or representation must not be relied upon as having been authorized by Union, Minerals, Silver Bell, or Mancos. The delivery of this Joint Proxy Statement at any time does not imply that the information herein is correct as of any time subsequent to the date hereof. This Joint Proxy Statement does not constitute an offer of securities within any jurisdiction to any person to whom such offer would be unlawful.

Union and Silver Bell are subject to the information requirements of the Securities Exchange Act of 1934 and in accordance therewith file reports and other information with the Securities and Exchange Commission. Information as of particular dates concerning Union's and Silver Bell's directors and officers, their remuneration, options granted to them, the principal holders of securities and any material interest of such persons in certain transactions is disclosed in proxy statements distributed to stockholders and filed with the Commission. Such reports, proxy statements and other information filed with the Commission can be inspected and copied at the public reference facilities maintained by the Commission at Room 6101, 1100 "L" Street, N.W., Washington, D.C. Copies of such material can be obtained from the Public Reference Section of the Commission at Washington, D.C. 20549 at prescribed rates.

Reports, proxy statements and other information concerning Union can also be inspected at the offices of the New York Stock Exchange, 11 Wall Street, New York, New York 10005.

REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

To the Board of Directors of
Union Oil Company of California

We have examined the consolidated balance sheets of Union Oil Company of California and its consolidated subsidiaries as of December 31, 1977 and the related statements of consolidated earnings, consolidated surplus and changes in consolidated financial position for the five years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the consolidated financial position of Union Oil Company of California and its consolidated subsidiaries as of December 31, 1977, and the results of their consolidated operations and changes in financial position for the five years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

COOPERS & LYBRAND

Los Angeles, California
February 14, 1978

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

CONSOLIDATED BALANCE SHEET

Thousands of Dollars

A S S E T S

	December 31, 1977	June 30, 1978 (Unaudited)
Current Assets		
Cash.....	\$ 15,865	\$ 1,535
Marketable securities (Note 9).....	51,643	166,876
Accounts and notes receivable, less allowance for doubtful receivables of \$14,057 in 1977 and \$13,319 in 1978.....	868,462	856,392
Inventories (Note 7)		
Crude oil.....	165,005	189,031
Refined products.....	184,876	156,127
Chemicals.....	36,786	29,583
Minerals.....	17,463	20,535
Supplies, merchandise, etc.....	32,832	27,252
Prepaid expenses.....	23,433	29,050
Total current assets.....	1,396,365	1,476,381
Investments and Long-Term Receivables		
Investment in affiliated companies.....	106,750	81,161
Investment in nonconsolidated subsidiary.....	26,188	26,885
Investment in securities (Note 9).....	31,594	51,671
Long-term receivables from affiliates and nonconsolidated subsidiary.....	48,956	43,510
Other long-term receivables.....	118,417	95,847
	331,905	299,074
Less: Allowance for losses.....	7,230	7,317
Total investments and long-term receivables.....	324,675	291,757
Properties (Note 8)		
Property, plant and equipment.....	6,209,795	6,409,985
Less: Accumulated depletion, depreciation and other allowances.....	3,242,497	3,364,343
Net properties.....	2,967,298	3,045,642
Deferred Charges.....	36,178	50,625
Total assets (Notes 3 and 4).....	<u>\$4,724,516</u>	<u>\$4,864,405</u>

See Notes to Consolidated Financial Statements.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

CONSOLIDATED BALANCE SHEET

Thousands of Dollars

LIABILITIES

	December 31, 1977	June 30, 1978 (Unaudited)
Current Liabilities		
Accounts payable.....	\$ 606,578	\$ 617,006
Short-term notes payable (Note 10).....	41,917	16,630
Cash dividends payable.....	24,652	26,363
Accrued payrolls.....	14,886	16,511
Accrued interest on long-term debt.....	15,636	13,435
Gasoline and other excise and sales taxes.....	24,134	31,592
Property, production, social security and sundry taxes.....	53,479	40,059
Federal and other taxes on income.....	38,697	68,052
Current portion of long-term debt.....	14,921	35,251
Total current liabilities.....	834,900	864,899
Long-Term Debt (Note 11).....	1,024,513	1,034,149
Advances, etc. Related to Future Production.....	24,377	19,781
Other Deferred Credits.....	49,129	54,690
Deferred Income Taxes.....	337,318	384,417
Minority Interests.....	16,826	16,569
Total liabilities.....	2,287,063	2,374,505

SHAREOWNERS' EQUITY

Preferred Shares, \$2.50 cumulative convertible without par value, shares outstanding — 2,219,644 shares in 1977, none in 1978 (Note 16).....	24,046	—
Common Shares, par value \$8½ per share, authorized — 65,000,000 shares, outstanding — 42,298,889 shares in 1977, 43,940,066 shares in 1978 (Notes 17 and 18).....	352,503	366,150
Surplus (see statement of consolidated surplus)		
Capital in excess of par or stated value of shares issued.....	193,940	189,575
Retained earnings.....	1,866,964	1,934,175
Total shareowners' equity.....	2,437,453	2,489,900
Total liabilities and shareowners' equity.....	\$4,724,516	\$4,864,405

See Notes to Consolidated Financial Statements.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

STATEMENT OF CONSOLIDATED SURPLUS

Thousands of Dollars

	Year Ended December 31,					Six Months Ended June 30, (Unaudited)	
	1973 Restated	1974 Restated	1975 Restated	1976 Restated	1977	1977 Restated	1978
Capital in Excess of Par or Stated Value of Shares Issued							
Balance at beginning of period.....	\$ 175,920	\$ 176,185	\$ 175,870	\$ 176,808	\$ 182,658	\$ 182,658	\$ 193,940
Redemption of preferred shares.....							(4,477)
Treasury shares acquired.....		(563)					
Excess from shares sold under warrants, stock appreciation rights and options; conversion of debt securities.....	265	248	938	5,850	11,282	7,211	112
Balance at end of period.....	<u>\$ 176,185</u>	<u>\$ 175,870</u>	<u>\$ 176,808</u>	<u>\$ 182,658</u>	<u>\$ 193,940</u>	<u>\$ 189,869</u>	<u>\$ 189,575</u>
Retained Earnings							
Balance at beginning of period.....	\$ 954,369	\$1,064,571	\$1,278,358	\$1,433,127	\$1,630,186	\$1,630,186	\$1,866,964
Net earnings.....	182,081	295,429	237,271	285,784	334,239	157,646	165,940
Total.....	1,136,450	1,360,000	1,515,629	1,718,911	1,964,425	1,787,832	2,032,904
Less:							
Cash dividends declared							
Preferred Shares.....	24,909	20,616	17,962	10,482	6,026	3,249	
Common Shares.....	46,970	61,026	64,540	78,243	91,435	44,928	50,523
Total.....	71,879	81,642	82,502	88,725	97,461	48,177	50,523
Premium on redemption of preferred shares.....							48,206
Balance at end of period.....	<u>\$1,064,571</u>	<u>\$1,278,358</u>	<u>\$1,433,127</u>	<u>\$1,630,186</u>	<u>\$1,866,964</u>	<u>\$1,739,655</u>	<u>\$1,934,175</u>

See Notes to Consolidated Financial Statements.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

STATEMENT OF CHANGES IN CONSOLIDATED FINANCIAL POSITION

Thousands of Dollars

	Year Ended December 31,					Six Months Ended June 30, (Unaudited)	
	1973 Restated	1974 Restated	1975 Restated	1976 Restated	1977	1977 Restated	1978
Source of funds							
Net earnings.....	\$182,081	\$295,429	\$237,271	\$ 285,784	\$ 334,239	\$157,646	\$165,940
Add charges not requiring outlay of working capital in the current period:							
Depletion and depreciation.....	175,957	215,267	234,779	279,238	308,155	147,633	125,121
Amortization of non- productive acreage costs.....	54,100	149,100	108,600	100,300	51,100	37,000	24,600
Provision for dry hole losses.....	53,000	89,700	78,100	104,700	96,600	55,700	51,500
Deferred taxes.....	18,867	(41,920)	18,065	15,947	89,600	43,335	52,100
Other.....	9,483	36,682	(3,282)	(3,082)	10,989	(1,842)	5,235
Funds provided from operations.....	493,488	744,258	673,533	782,887	890,683	439,472	424,496
Increases in long-term debt.....	28,186	183,574	212,941	283,971	114,633	1,537	61,796
Book value of assets sold.....	31,380	15,620	20,656	47,739	38,961	12,879	72,334
Total.....	\$553,054	\$943,452	\$907,130	\$1,114,597	\$1,044,277	\$453,888	\$558,626
Use of funds							
Capital expenditures.....	\$398,249	\$700,788	\$700,976	\$ 817,780	\$ 812,877	\$404,166	\$327,325
Decreases in long-term debt.....	50,600	121,401	133,900	96,968	33,648	10,323	53,320
Cash dividends declared.....	71,879	81,642	82,502	88,725	97,461	48,177	50,523
Investments and long-term receivables.....	10,440	12,655	38,558	37,394	21,218	(4,848)	(6,362)
Redemption of preferred shares.....							63,184
Other.....	2,426	(12,794)	(32,535)	(17,297)	6,941	2,041	20,619
Increase (decrease) in working capital.....	19,460	39,760	(16,271)	91,027	72,132	(5,971)	50,017
Total.....	\$553,054	\$943,452	\$907,130	\$1,114,597	\$1,044,277	\$453,888	\$558,626
Increase (decrease) in working capital							
Increase (decrease) in current assets							
Cash and marketable securities.....	\$(34,226)	\$ 52,958	\$(40,907)	\$ 89,990	\$ (143,983)	\$(30,550)	\$100,903
Accounts and notes receivable.....	145,953	141,899	36,197	44,815	80,284	23,191	(12,070)
Inventories.....	(665)	125,724	28,274	23,684	93,180	90,700	(14,434)
Prepaid expenses.....	(912)	5,345	(229)	501	2,490	(1,169)	5,617
Total.....	110,150	325,926	23,335	158,990	31,971	82,172	80,016
Increase (decrease) in current liabilities							
Accounts payable and accrued liabilities.....	52,812	173,125	68,459	(36,168)	122,487	129,599	11,563
Short-term notes payable.....	—	—	58,133	55,751	(71,967)	10,882	(25,287)
Current portion of long-term debt.....	10,605	8,818	(42,261)	(4,640)	5,012	(4,154)	20,330
Taxes payable.....	27,273	104,223	(44,725)	53,020	(95,693)	(48,184)	23,393
Total.....	90,690	286,166	39,606	67,963	(40,161)	88,143	29,999
Net increase (decrease) in working capital	\$ 19,460	\$ 39,760	\$(16,271)	\$ 91,027	\$ 72,132	\$ (5,971)	\$ 50,017

See Notes to Consolidated Financial Statements.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 1 — Accounting Policies

Principles of Consolidation

The consolidated financial statements include the accounts of all subsidiary companies except Union Oil Credit Corporation, a wholly-owned subsidiary engaged in financing certain accounts receivable, which is accounted for on the equity basis.

Investment in affiliates owned 50% or less, other than a foreign petroleum company, are accounted for by the equity method. Investments in such companies are stated at cost plus the Company's equity in undistributed earnings after acquisition. Income taxes estimated to be payable when undistributed earnings are distributed are included in deferred taxes.

Inventories

Inventories of crude oil and refined products are valued at cost under the last-in, first-out (LIFO) method. Other inventories are valued at cost using various methods.

Amortization of Nonproductive Acreage Costs

Acquisition costs of exploratory acreage are capitalized. Full amortization of the nonproductive portion of such costs is provided over the shorter of the exploratory period or the lease holding period. Costs of successful leases are transferred to productive properties and depleted. Geophysical costs are capitalized and the portion applicable to acreage acquired is amortized in the same manner as the acquisition cost. The portion not related to acreage acquired is fully amortized currently. Leasehold rentals are charged to income as incurred.

Provision for Dry Hole Losses

The costs of drilling and equipping exploratory and development wells are capitalized. Dry holes are fully provided for currently.

Depletion and Depreciation

Depletion and depreciation related to proved oil and gas properties are calculated at unit of production rates based upon estimated recoverable reserves.

Mineral development costs are capitalized and amortized on a unit of production basis.

Depreciation of other properties is generally on a straight-line basis using various rates based on useful lives.

Maintenance and Repairs

Expenditures for maintenance and repairs are charged currently to earnings. In general, replacements and betterments are charged to the respective property accounts and such accounts are relieved of the cost of any property replaced.

Retirements and Disposals of Properties

Losses on retirement of facilities for which individual allowances are accumulated are charged to current depreciation expense and on retirements of other properties to accumulated allowances. Losses or gains on sales of properties are included in current earnings.

Investment Tax Credit

The allowable investment tax credit is applied as a current reduction of income tax expense.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 2 — Merger with Molycorp, Inc.

On July 29, 1977, the Company exchanged 4,193,885 shares of its Common Stock for all of the outstanding common stock of Molycorp, Inc., a company engaged primarily in mining, processing and marketing of molybdenum and rare earths.

The merger was accounted for as a "pooling of interests" whereby all financial data for periods prior to the merger have been restated to combine the operations of Union and Molycorp and to conform to the accounting policies of Union. Such conforming adjustments were not material to the accounts of the combined enterprise.

Note 3 — Business Segments

The Company is engaged principally in petroleum, chemical, and mineral operations. Petroleum operations involve the exploration, production, transportation and sale of crude oil, natural gas and geothermal resources; and the manufacture, transportation and marketing of petroleum products. Chemical operations involve the manufacture, purchase and marketing of chemicals for industrial and agricultural uses. Mineral operations primarily involve the exploration, development, mining, processing and marketing of molybdenum, columbium, rare earths and uranium. Other operations include construction, paving and rock plant operations (sold as of May 31, 1978); and real estate development and sales. Financial data, by segment, are set forth below.

	Revenues			Earnings Before Income Taxes			Assets December 31, 1977
	1975	1976	1977	1975	1976	1977	
	Millions of Dollars						
Petroleum operations.....	\$4,970.1	\$5,258.5	\$5,445.5	\$441.1	\$575.2	\$650.3	\$3,760.0
Chemical operations.....	515.0	531.2	568.9	116.5	82.4	61.0	545.6
Mineral operations.....	64.1	92.1	117.4	4.5	19.9	18.2	172.3
Other operations.....	106.9	110.6	142.9	7.7	(2.9)	6.3	96.0
Research, Administrative, Interest, and Other Unallocated.....	12.1	9.5	4.7	(91.7)	(106.8)	(129.9)	150.6
Intersegment Eliminations.....	(105.0)	(130.1)	(180.2)				
Total.....	<u>\$5,563.2</u>	<u>\$5,871.8</u>	<u>\$6,099.2</u>	<u>\$478.1</u>	<u>\$567.8</u>	<u>\$605.9</u>	<u>\$4,724.5</u>

	Capital Expenditures			Depreciation, Depletion and Amortization		
	1975	1976	1977	1975	1976	1977
	Millions of Dollars					
Petroleum operations.....	\$599.4	\$608.7	\$615.7	\$397.2	\$458.7	\$429.8
Chemical operations.....	77.0	173.9	140.1	6.6	7.7	7.7
Mineral operations.....	16.7	8.6	32.6	13.3	13.5	12.4
Other and Unallocated.....	7.9	26.6	24.5	4.4	4.3	6.0
Total.....	<u>\$701.0</u>	<u>\$817.8</u>	<u>\$812.9</u>	<u>\$421.5</u>	<u>\$484.2</u>	<u>\$455.9</u>

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 3 — Business Segments (Continued)

Intersegment revenue eliminations are mainly transfers from petroleum operations to chemical operations at prices which approximate market.

Mineral operations include the Company's equity in earnings and investment in affiliates of \$4.3 million and \$35.6 million in 1975, \$10.5 million and \$64.2 million in 1976 and \$10.0 million and \$69.4 million in 1977. Such amounts for affiliates included in other segments are not material.

Note 4 — Geographic Areas of Operations

	Revenues			Earnings Before Income Taxes			Assets December 31, 1977
	1975	1976	1977	1975	1976	1977	
	Millions of Dollars						
United States.....	\$4,506.5	\$4,758.7	\$4,998.2	\$434.9	\$514.5	\$537.0	\$3,789.4
Canada.....	129.2	151.8	89.2	32.6	43.2	35.8	137.8
Other foreign.....	1,417.2	1,758.0	1,998.7	102.3	116.9	163.0	646.7
Administrative, Unallocated, etc.....	12.1	9.5	4.7	(91.7)	(106.8)	(129.9)	150.6
Intersegment Eliminations.....	(501.8)	(806.2)	(991.6)				
Total.....	<u>\$5,563.2</u>	<u>\$5,871.8</u>	<u>\$6,099.2</u>	<u>\$478.1</u>	<u>\$567.8</u>	<u>\$605.9</u>	<u>\$4,724.5</u>

Intersegment revenue eliminations represent transfers (at prices which approximate market) from geographic areas for 1975, 1976 and 1977 in millions of dollars as follows: United States \$2, \$2 and \$1.8; Canada \$27.9, \$16.7 and \$6.2 and other foreign \$473.7, \$789.3 and \$983.6.

Revenues derived from foreign operations, net of intersegment eliminations, for the years 1973, 1974, 1975, 1976 and 1977 in millions of dollars were as follows: \$346.8, \$931.4, \$1,044.8, \$1,103.8 and \$1,098.1.

Realized and unrealized gains/losses on foreign exchange, which are included in miscellaneous income, are not significant in any of the periods reported with the exception of 1974 in which a \$24.5 million loss was incurred.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 5 — Federal and Other Taxes on Income

The composition of Federal and other taxes on income is as follows:

	Year Ended December 31,					Six Months Ended June 30,	
	1973	1974	1975	1976	1977	1977	1978
	Millions of Dollars						
Federal							
Current.....	\$32.3	\$104.6	\$ 91.2	\$160.6	\$ 93.3	\$ 56.6	\$ 67.1
Investment tax credit.....	(12.4)	(24.5)	(21.2)	(32.4)	(48.8)	(28.2)	(20.5)
Deferred.....	16.5	(39.4)	17.7	14.1	74.0	37.1	43.3
Total.....	36.4	40.7	87.7	142.3	118.5	65.5	89.9
State							
Current.....	8.5	23.8	19.0	25.2	20.5	8.7	9.8
Deferred.....	1.4	(6.3)	2.3	1.9	11.2	5.3	6.4
Total.....	9.9	17.5	21.3	27.1	31.7	14.0	16.2
Foreign							
Current.....	35.9	136.9	133.2	114.8	118.2	60.7	58.7
Deferred.....	.8	6.7	(1.4)	(2.2)	3.3	1.0	2.4
Total.....	36.7	143.6	131.8	112.6	121.5	61.7	61.1
Total taxes on income.....	<u>\$83.0</u>	<u>\$201.8</u>	<u>\$240.8</u>	<u>\$282.0</u>	<u>\$271.7</u>	<u>\$141.2</u>	<u>\$167.2</u>

Deferred taxes on income resulted from the following timing differences between financial and taxable income:

Accelerated depreciation for tax in excess of book provision.....	\$20.3	\$ 14.5	\$20.5	\$20.9	\$33.4	\$20.2	\$24.1
Deductions for tax in excess of (less than) book provisions related to exploration and development costs....	(.2)	(39.6)	(17.0)	(16.4)	51.6	16.6	26.3
Other items.....	(1.4)	(15.9)	14.8	11.5	4.6	7.1	1.7
Total deferred taxes on income.....	<u>\$18.7</u>	<u>\$(41.0)</u>	<u>\$18.3</u>	<u>\$16.0</u>	<u>\$89.6</u>	<u>\$43.9</u>	<u>\$52.1</u>

Reconciliation of the total provision for taxes on income to the current federal statutory rate is as follows:

Taxes on book earnings computed at 48%.....	\$127.2	\$238.7	\$229.5	\$272.5	\$290.9	\$143.4	\$159.9
Foreign taxes in excess of 48%.....	—	48.2	39.7	43.1	28.6	23.5	21.3
State taxes, net of U.S. tax effect.....	5.1	9.1	11.1	14.1	16.5	7.3	8.4
U.S. tax reduction for domestic depletion.....	(32.7)	(56.8)	(18.6)	(14.2)	(10.4)	(5.2)	(4.8)
U.S. investment tax credit.....	(12.4)	(24.5)	(21.2)	(32.4)	(48.8)	(28.2)	(20.5)
All other items.....	(4.2)	(12.9)	.3	(1.1)	(5.1)	.4	2.9
Total taxes on income.....	<u>\$ 83.0</u>	<u>\$201.8</u>	<u>\$240.8</u>	<u>\$282.0</u>	<u>\$271.7</u>	<u>\$141.2</u>	<u>\$167.2</u>

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 5 — Federal and Other Taxes on Income (Continued)

No provision for U.S. taxes has been made related to the Company's share of the undistributed earnings of foreign subsidiaries and affiliates which have been retained for reinvestment or which, if distributed, are not expected to result in additional U.S. tax. Such undistributed earnings amounted to \$156.1 million as of December 31, 1977 and \$166.5 million as of June 30, 1978.

At December 31, 1977, the Company had no unused investment tax credit.

Note 6 — Earnings Per Share

Earnings per Common Share assuming no dilution are based on weighted average Common Shares outstanding during each period and earnings after deducting preferred dividend requirements. Earnings per Common Share assuming full dilution assumes the weighted average outstanding preferred shares, convertible debentures and stock options were converted into Common Shares.

Note 7 — Inventories

Inventories of crude oil, refined products, chemicals, minerals and merchandise used in the computation of cost of products sold and operating expenses, in millions of dollars, were:

December 31,						June 30,	
1972	1973	1974	1975	1976	1977	1977	1978
\$153.5	\$153.1	\$272.7	\$299.6	\$322.1	\$408.5	\$409.2	\$399.6

Current cost of inventories exceeded the LIFO inventory value included above by \$286.5 million at December 31, 1977 and \$272.5 million at June 30, 1978.

Note 8 — Properties

Investment in properties, stated at cost, was as follows:

	December 31, 1977		June 30, 1978	
	Gross	Net	Gross	Net
Millions of Dollars				
Petroleum operations:				
Exploration.....	\$ 689.2	\$ 260.9	\$ 756.0	\$ 291.0
Production.....	3,021.7	1,140.7	3,164.9	1,215.4
Refining, marketing and transportation.....	1,687.2	993.1	1,698.1	982.2
Total.....	5,398.1	2,394.7	5,619.0	2,488.6
Chemical operations.....	489.9	427.4	505.8	432.1
Mineral operations.....	194.9	66.1	204.4	69.7
Other.....	126.9	79.1	80.8	55.2
Total.....	\$6,209.8	\$2,967.3	\$6,410.0	\$3,045.6

Accumulated depletion, depreciation and other allowances totaled \$3,242.5 million and \$3,364.4 million at December 31, 1977 and June 30, 1978, respectively.

Note 9 — Marketable Securities

Marketable securities are carried at cost. At December 31, 1977 and June 30, 1978, unrealized gains and losses were not material.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 10 — Short-Term Notes Payable

The maximum amount of the Company's short-term notes outstanding at any month-end was \$124.3 million during 1977 and \$40.4 million during the six months ended June 30, 1978. The daily average amount outstanding was approximately \$68.0 million during 1977 and \$33.7 million during the six months ended June 30, 1978.

The average interest rate on the amount outstanding at December 31, 1977 and June 30, 1978 was 6.7% and 7.6% and the weighted average interest rate on amounts outstanding was 5.3% during 1977 and 6.65% during the six months ended June 30, 1978. The weighted average interest rate is determined by weighting actual amounts of short-term notes outstanding with actual interest rates and number of days outstanding for each issue. Daily average amounts outstanding are determined by dividing weighted average interest rates into actual interest accrued during the year.

Terms of the Company's short-term notes are for repayment at maturity. Short-term notes with a maturity period of 30 days or longer may be extended, at the option of the noteholder, up to a maximum of 7 additional days.

Note 11 — Long-Term Debt and Credit Agreements

Long-term debt, excluding amounts due within one year shown under current liabilities, consisted of the following:

	December 31, 1977	June 30, 1978
	Millions of Dollars	
Bond and debentures		
8½% Debentures due 1987 to 2006.....	\$ 200.0	\$ 200.0
8½% Debentures due 1982.....	150.0	150.0
8½% Debentures due 1985.....	150.0	150.0
6½% Debentures due 1979 to 1998.....	141.0	118.7
4½% Debentures due 1979 to 1986.....	42.8	39.6
7½% Debentures due 1979 to 1987 (Eurodollars).....	26.0	24.3
7¼% Bonds due 1980 to 1989 (payable in Swiss francs).....	30.2	32.3
6½% to 7½% Pollution Control Revenue Bonds due 1991 to 2001.....	51.1	50.7
6.2% Marine Terminal Revenue Bonds due 2008.....	—	22.5
Notes		
8.3% Notes due 1981 to 1997.....	83.1	83.1
3¾% Notes due 1981 to 1990.....	50.0	50.0
Note due 1979 to 1982, with variable interest rates established weekly based on short-term money market rates.....	24.0	30.5
4% to 7½% Notes due 1979 to 1994.....	22.7	23.0
7% Notes due 1979 (Eurodollars).....	20.0	—
8½% Notes due 1986.....	—	30.0
Other miscellaneous debt.....	33.6	29.4
Total.....	<u>\$1,024.5</u>	<u>\$1,034.1</u>

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 11 — Long-Term Debt and Credit Agreements (Continued)

Maturities of long-term debt for the remaining six months of 1978 and the following four years are set forth below:

	Millions of Dollars
1978.....	\$ 10.6
1979.....	36.5*
1980.....	20.4*
1981.....	35.6*
1982.....	185.6*

* At June 30, 1978, the Company had acquired and irrevocably deposited with the trustee for retirement: (a) 4 $\frac{7}{8}$ % Debentures amounting to \$4.3 million excluded herein, which meets the sinking fund requirements on such debentures for 1979, 1980 and a portion of 1981; (b) 6% Debentures amounting to \$25.3 million excluded herein, which meets the sinking fund requirements on such debentures for 1979 through 1982 and a portion of 1983; (c) 7 $\frac{1}{2}$ % Debentures amounting to \$2.7 million excluded herein, which meets the sinking fund requirements on such debentures for 1979 and a portion of 1980.

With the exception of the \$.4 million of the 4 $\frac{1}{4}$ % Convertible Subordinated Debentures due 1991 that were outstanding at June 30, 1978 and the aforementioned securities, the Company has no other long-term debt outstanding in amounts different than those authorized by Indenture.

Arrangements with various banks make available to the Company and its subsidiaries lines of credit for a one year period with no commitment fees. The amount available under such arrangements at December 31, 1977 and June 30, 1978 was \$235.0 million and \$225.0 million, respectively.

Terms of certain debt agreements contain restrictive provisions relating to working capital and payment of dividends (other than share dividends), etc. The most restrictive provision relating to these matters at June 30, 1978 requires maintenance of \$40 million working capital.

Substantially all of the debt of subsidiaries has been guaranteed by Union Oil Company of California.

Debt discount and issuance expense, which is not material, is amortized on the straight-line basis over the life of the debt.

Note 12 — Commitments; Leases and Charter Hires

Firm commitments for the acquisition of permanent investments and fixed assets and for the purchase, repurchase and construction of assets are not considered material or unusual in relation to the kind of business in which the Company is engaged.

The Company has noncancellable long-term leases, other than those included as long-term debt, relating to marketing, refining, chemical and pipeline facilities, office buildings, and long-term tankship charter agreements for varying periods extending to the year 2053. The Company has land rights,

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 12 — Commitments; Leases and Charter Hires (Continued)

purchase options, or favorable renewal options for a substantial portion of the leased properties. Total rental expense included in current earnings is as follows:

	1976	1977	Six Months Ended June 30,	
			1977	1978
	Millions of Dollars			
Fixed amount rentals				
Financing type leases.....	\$ 37.4	\$ 35.5	\$17.0	\$16.7
Operating leases.....	67.0	71.5	33.1	26.2
Contingent rentals (based on sales, usage, etc.)				
Financing type leases.....	.2	.2	.1	.1
Operating leases.....	8.3	8.9	3.5	3.5
Total rental expense.....	112.9	116.1	53.7	46.5
Sublease rental income.....	17.6	16.8	8.6	8.7
Net rental expense.....	<u>\$ 95.3</u>	<u>\$ 99.3</u>	<u>\$45.1</u>	<u>\$37.8</u>

Total rental expense and sublease rental income for the years 1973, 1974, and 1975 in millions of dollars are as follows: \$80.9 and \$17.9; \$94.8 and \$18.9; \$103.3 and \$18.6.

At December 31, 1977, minimum payments required by these leases for future periods are as follows:

	Financing Type Leases	Operating Leases	Total
	Millions of Dollars		
1978.....	\$ 34.5	\$ 42.2	\$ 76.7
1979.....	34.0	32.4	66.4
1980.....	33.8	20.0	53.8
1981.....	33.9	13.5	47.4
1982.....	32.7	11.3	44.0
Balance.....	261.0	38.5	299.5
Total rental obligations.....	<u>\$429.9</u>	<u>\$157.9</u>	<u>\$587.8</u>

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 12 — Commitment; Leases and Charter Hires (Continued)

The present value of rental obligations for financing type leases at December 31, 1977 and June 30, 1978, computed by discounting future minimum payments at interest rates indicative of borrowing costs, are as follows:

	December 31, 1977	June 30, 1978
	Millions of Dollars	
Retail service stations.....	\$101.9	\$ 99.2
Refining and chemical plants.....	107.8	104.3
Pipelines, tankcars and tankships.....	50.4	48.7
Office buildings, etc.....	14.0	13.3
Total.....	<u>\$274.1</u>	<u>\$265.5</u>
Weighted average interest rate.....	<u>6.1%</u>	<u>6.3%</u>

The Company does not have noncancellable subleases in any material amount related to leased properties.

There would have been no material effect on net income had financing type leases been recorded as debt and capital investment for the five years ended December 31, 1977 and the period ended June 30, 1978.

Note 13 — Guarantees and Contingent Liabilities

The Company has guaranteed approximately \$38.0 million of the debt obligations of others, primarily companies in which a substantial stock interest is held. In addition, the Company has agreed to provide specified revenues by the shipment of products or crude oil through pipelines of companies in which stock interests are held. If such companies are unable to meet their debt obligations, Union may be required to advance funds against future transportation charges. No loss is anticipated as a result of these agreements.

Seven civil antitrust actions are pending against the Company and other major oil companies seeking treble damages, injunctive relief and divestiture of the exploration and production segments of the defendants' businesses. The Company has denied the allegations of unlawful practices in these actions and believes the actions can be successfully defended. In view of the broad and largely undefined relief sought, however, an adverse decision could have a significant effect upon the scope and nature of the Company's operations.

The Company has certain other contingent liabilities with respect to litigation, claims and contractual agreements arising in the ordinary course of business. In the opinion of management, such contingent liabilities will not result in any loss which would materially affect the Company's financial position.

Note 14 — Retirement Plans

The Company has several noncontributory retirement plans covering substantially all employees which are funded with insurance companies and a corporate trustee. At December 31, 1977 the assets exceeded the actuarially computed values of vested benefits except for one plan of a subsidiary where the unfunded amount was not material. Total costs of the plans were: \$11.1 million in 1973, \$14.9 million in 1974, \$23.3 million in 1975, \$25.8 million in 1976, \$29.2 million in 1977, \$14.6 million in the six months ended June 30, 1977 and \$16.4 million in the six months ended June 30, 1978.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 15 — Research and Development Costs

Charges to income for research and development were as follows: \$11.0 million in 1973, \$16.0 million in 1974, \$18.6 million in 1975, \$17.2 million in 1976, \$17.1 million in 1977, \$11.5 million in the six months ended June 30, 1977 and \$12.8 million in the six months ended June 30, 1978.

Note 16 — Preferred Shares

The Preferred Shares were called for redemption as of March 10, 1978 at \$65 per share plus accrued dividends of \$.192 per share.

Increases and (decreases) in shares outstanding were as follows (dollars in thousands):

	Shares	Amount
Outstanding at December 31, 1972.....	9,828,262	\$104,496
Conversion into Common Shares.....	(181,565)	(1,967)
Outstanding at December 31, 1973.....	9,646,697	102,529
Conversion into Common Shares.....	(1,636,995)	(17,734)
Outstanding at December 31, 1974.....	8,009,702	84,795
Conversion into Common Shares.....	(1,175,183)	(12,731)
Outstanding at December 31, 1975.....	6,834,519	72,064
Conversion into Common Shares.....	(3,555,970)	(38,523)
Outstanding at December 31, 1976.....	3,278,549	33,541
Conversion into Common Shares.....	(1,058,905)	(9,495)
Outstanding at December 31, 1977.....	2,219,644	24,046
Conversion into Common Shares.....	(1,251,842)	(13,561)
Redeemed for cash.....	(967,802)	(10,485)
Outstanding at June 30, 1978.....	<u>—0—</u>	<u>\$ —0—</u>

Note 17 — Common Shares

Authorized — 65,000,000 Shares, Par Value \$8½ Per Share.

At December 31, 1977 and June 30, 1978, 3,490,300 shares and 588,110 shares, respectively, were reserved for issuance as follows:

	December 31, 1977	June 30, 1978
Conversion of Preferred Shares.....	2,885,537	—
Conversion of 4¼ % Convertible Debentures.....	16,474	15,641
Future grants under options.....	391,590	391,841
Exercise of options.....	196,699	180,628
	<u>3,490,300</u>	<u>588,110</u>

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 17 — Common Shares (Continued)

Increases and (decreases) in shares outstanding were as follows (dollars in thousands):

	Common Shares		Treasury Shares	
	Shares	Amount	Shares	Amount
Outstanding at December 31, 1972.....	31,410,635	\$261,756	1,040,303	\$ 8,670
Conversion of Preferred Shares.....	236,032	1,967		
Exercise of Warrants and Stock Options; Conversion of Debt Securities.....	12,549	104	(52)	(1)
Outstanding at December 31, 1973.....	31,659,216	263,827	1,040,251	8,669
Conversion of Preferred Shares.....	2,128,030	17,734		
Acquisition of Treasury Shares.....	(44,401)	(370)	44,401	370
Exercise of Warrants and Stock Options; Conversion of Debt Securities.....	12,888	107	(408)	(4)
Outstanding at December 31, 1974.....	33,755,733	281,298	1,084,244	9,035
Conversion of Preferred Shares.....	1,527,698	12,731		
Acquisition of Treasury Shares.....	(311)	(3)	311	3
Exercise of Warrants, Stock appreciation rights and Options; Conversion of Debt Securities.....	37,371	311	(550)	(5)
Outstanding at December 31, 1975.....	35,320,491	294,337	1,084,005	9,033
Conversion of Preferred Shares.....	4,621,229	38,510		
Exercise of Warrants, Stock appreciation rights and Options; Conversion of Debt Securities.....	371,204	3,094	(354,147)	(2,951)
Outstanding at December 31, 1976.....	40,312,924	335,941	729,858	6,082
Conversion of Preferred Shares.....	1,347,123	11,226		
Exercise of Warrants, Stock appreciation rights and Options; Conversion of Debt Securities.....	638,842	5,336	(729,858)	(6,082)
Outstanding at December 31, 1977.....	42,298,889	352,503	-0-	-0-
Conversion of Preferred Shares.....	1,625,389	13,545		
Exercise of Warrants, Stock appreciation rights and Options; Conversion of Debt Securities.....	15,788	102		
Outstanding at June 30, 1978.....	43,940,066	\$366,150	-0-	\$ -0-

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 18 — Stock Options

Common Shares — Qualified and Nonqualified Stock Options

Under the Stock Option Plan of 1975, the Board of Directors is authorized to grant qualified or nonqualified options to officers and key employees of the Company and its consolidated subsidiaries to purchase, at market value at date of grant, up to 300,000 Common Shares. Options must be granted prior to January 27, 1985 (the termination date of the Plan) and contain cancellation provisions in the event of termination of employment, etc. Certain options may be exercisable until February 1, 1988.

Nonqualified stock options granted under the Plan may include stock appreciation rights either at the time of grant or by amendment. Settlement upon the exercise of a stock appreciation right is made in cash or shares or a combination thereof — as determined by the Company — the total amount of which is charged to expense.

The Stock Option Plan of 1975 replaces the Qualified Stock Option Plan of 1966 and the Nonqualified Stock Option Plan of 1970. The 1966 Plan expired on January 31, 1976. No additional options may be granted under the 1970 Plan. Certain options granted pursuant to the Nonqualified Stock Option Plan of 1970 may be exercisable until February 2, 1985.

Pursuant to the terms of the Agreement of Merger between the Company and Molycorp, Inc. each outstanding option under the Molycorp 1973 Employees Qualified Stock Option Plan became an option to purchase the number of whole shares of Union Common Stock which the holder would have been entitled to receive had he exercised the option in full immediately prior to the completion of the Merger. The option price per share of Union Common Stock is 96.62% of the per share option price applicable to shares of Molycorp Common Stock prior to the Merger. No additional options will be granted under the Plan. Certain options granted pursuant to this Plan may be exercisable until August 25, 1981.

Data regarding Common Shares under the Union qualified and nonqualified stock option plans at June 30, 1978 and as to options granted and options that became exercisable or were exercised during 1973 through June 30, 1978 are as follows:

	Shares	Option Price		Market Value	
		Per Share	Total	Per Share	Total
Under option at June 30, 1978.....	141,404	\$30.81-\$55.3125	\$4,947,098	\$30.81-\$55.3125(a)	\$4,947,098
Granted:					
1973.....	49,530	38.0625	1,885,236	38.0625 (a)	1,885,236
1974.....	171,736	30.8125	5,291,616	30.8125 (a)	5,291,616
1975.....	15,000	35.875	538,125	35.875 (a)	538,125
1976.....	None				
1977.....	21,460	55.3125	1,187,006	55.3125 (a)	1,187,006
Six months ended June 30, 1978.....	1,940	46.3125	89,846	46.3125 (a)	89,846

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 18 — Stock Options (Continued)

	Shares	Option Price		Total	Market Value	
		Per Share			Per Share	Total
Became exercisable:						
1973.....	37,744	\$31.75	-\$38.0625	\$1,290,281	\$38.125-\$38.875 (b)	\$1,449,565
1974.....	96,537	30.8125-	38.0625	3,091,666	31.25 - 47.125 (b)	3,395,991
1975.....	100,152	30.8125-	35.875	3,131,257	36.125- 47.25 (b)	4,572,266
1976.....	14,862	30.8125-	35.875	502,806	42.50 - 44.44 (b)	646,185
1977.....	10,730	55.3125		593,503	51.56 (b)	553,266
Six months ended June 30, 1978.....	10,730	55.3125		593,503	49.31 (b)	529,123
Exercised:						
1973.....	8,516	31.75	- 38.0625	274,977	37.875- 50.375 (c)	381,608
1974.....	10,448	30.8125-	38.0625	337,620	34.50 - 55.38 (c)	427,922
1975.....	34,917	30.8125-	35.875	1,127,542	36.25 - 50.375 (c)	1,353,810
1976.....	14,640	30.8125-	35.875	461,592	42.13 - 58.31 (c)	731,036
1977.....	7,942	30.8125-	31.75	246,841	50.06 - 59.06 (c)	436,281
Six months ended June 30, 1978.....	2,755	30.8125-	31.75	86,510	47.875- 52.6875(c)	129,026

(a) At the date options were granted.

(b) At the date options became exercisable.

(c) At the date options were exercised.

Stock option data relating to the Molycorp 1973 Employees Qualified Stock Option Plan from July 29, 1977 through June 30, 1978 are as follows:

	Shares	Option Price		Total	Market Price	
		Per Share			Per Share	Total
Under option at June 30, 1978.....	39,224	\$15.22-\$31.83		\$985,642	\$15.22-\$31.83(a)	\$985,642
Granted.....	None					
Became Exercisable:						
From July 29 through December 30, 1977...	17,125	\$16.43-\$29.23		\$382,735	\$50.88-\$55.50(b)	\$912,236
Six months ended June 30, 1978.....	2,241	\$31.83		\$ 71,322	\$48.81	\$109,389

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 18 — Stock Options (Continued)

	Shares	Option Price		Market Price	
		Per Share	Total	Per Share	Total
Exercised:					
From July 29 through December 31, 1977....	15,268	\$15.22-\$31.83	\$269,536	\$50.38-\$56.06(c)	\$813,306
Six months ended June 30, 1978.....	12,202	\$15.22-\$31.83	\$227,940	\$47.44-\$51.31(c)	\$609,892

- (a) At the date options were granted.
- (b) At the date options became exercisable.
- (c) At the date options were exercised.

Under these Plans, authorized but unissued shares have been delivered on the exercise of options and, where applicable, the settlement of stock appreciation rights. The excess of proceeds received over the par value of shares issued as the result of the exercise of stock options have been credited to the capital in excess of par or stated value of shares issued. Charges to income in connection with stock appreciation rights exercised under these plans were not material.

Note 19 — Incentive Compensation Plans

The Company has an Incentive Compensation Plan which provides that there may be established for each fiscal year an Incentive Compensation Fund from which annual awards may, at the discretion of the non-employee members of the Board of Directors, be granted to a limited number of executives and key employees. The fund for each fiscal year is based on the Company's consolidated net earnings after taxes for the year adjusted to exclude (a) the net effect of any incentive compensation awards granted (b) any extraordinary charges and credits (c) an amount equivalent to 6% of average share-owners' equity for the year. The maximum annual fund consists of not more than 3% of the balance of consolidated net earnings after such exclusions. Any annual fund may be allocated in whole or in part. Unallocated portions may, as determined by the Board, be carried forward and allocated in subsequent years.

Charges to income for awards under the Plan, in millions of dollars, were as follows: 1973, \$1.2; 1974, \$1.4; 1975, \$2.4; 1976, \$2.7; 1977, \$3.3; in the six months ended June 30, 1977, \$1.6; in the six months ended June 30, 1978, \$2.0.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 20 — Supplementary Information Relating to the Statement of Consolidated Earnings

	Year Ended December 31,					Six Months Ended June 30,	
	1973	1974	1975	1976	1977	1977	1978
	Millions of Dollars						
Maintenance and repairs.....	\$130.9	\$166.9	\$181.9	\$203.4	\$217.3	\$ 90.6	\$119.2
Taxes, other than income taxes							
Excise taxes.....	\$361.3	\$351.3	\$350.9	\$352.6	\$365.6	\$180.6	\$184.1
Severance and other taxes on production.....	23.0	67.7	100.3	90.0	88.9	47.4	40.2
Import taxes and duties.....	.6	29.2	89.8	13.0	10.1	4.5	4.3
Real and personal property taxes.....	48.7	52.2	56.8	60.6	64.5	32.3	35.2
Miscellaneous taxes.....	2.9	3.4	5.7	6.4	7.7	4.1	3.8
Total.....	\$436.5	\$503.8	\$603.5	\$522.6	\$536.8	\$268.9	\$267.6
Rents(a).....	\$ 80.9	\$ 94.8	\$103.3	\$112.9	\$116.1	\$ 53.7	\$ 46.5

(a) Excludes rentals in lieu of drilling on oil and gas leases.

Note 21 — Quarterly Results (Unaudited)

	1976 — Quarters			
	1st	2nd	3rd	4th
	Millions of Dollars except per share amounts			
Sales and Operating Revenues (excl. excise taxes).....	\$1,383.0	\$1,319.0	\$1,300.5	\$1,429.6
Gross Margin*.....	\$ 148.6	\$ 116.8	\$ 162.3	\$ 168.9
Earnings Before Taxes on Income.....	\$ 138.7	\$ 109.0	\$ 152.0	\$ 168.1
Net Earnings.....	\$ 69.0	\$ 56.6	\$ 73.8	\$ 86.4
Net Earnings Per Common Share.....				
Assuming no dilution.....	\$1.82	\$1.45	\$1.80	\$2.10
Assuming full dilution.....	\$1.54	\$1.26	\$1.64	\$1.92
	1977 — Quarters			
	1st	2nd	3rd	4th
	Millions of Dollars except per share amounts			
Sales and Operating Revenues (excl. excise taxes).....	\$1,356.1	\$1,457.9	\$1,381.1	\$1,473.4
Gross Margin*.....	\$ 141.7	\$ 174.0	\$ 200.7	\$ 150.2
Earnings Before Taxes on Income.....	\$ 140.9	\$ 158.0	\$ 176.7	\$ 130.4
Net Earnings.....	\$ 77.0	\$ 80.7	\$ 95.5	\$ 81.1
Net Earnings Per Common Share.....				
Assuming no dilution.....	\$1.83	\$1.90	\$2.24	\$1.89
Assuming full dilution.....	\$1.71	\$1.78	\$2.10	\$1.79

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 21 — Quarterly Results (Unaudited) (Continued)

	1978 — Quarters	
	1st	2nd
	Millions of Dollars except per share amounts	
Sales and Operating Revenues (excl. excise taxes).....	\$1,353.0	\$1,496.7
Gross Margin*.....	\$ 170.0	\$ 184.5
Earnings Before Taxes on Income.....	\$ 151.9	\$ 181.2
Net Earnings.....	\$ 79.3	\$ 86.6
Net Earnings Per Common Share.....		
Assuming no dilution.....	\$1.84	\$1.97
Assuming full dilution.....	\$1.76	\$1.97

* Gross margin equals sales (excl. excise taxes) and other operating revenues less cost of products sold and operating expense, selling expense, depletion and depreciation, amortization of nonproductive acreage costs, provision for dry hole losses and property and other operating taxes.

Note 22 — Estimated Current Replacement Cost Data (Unaudited)

As required by the Securities and Exchange Commission, the Company has estimated replacement cost data for inventories and certain of its productive capacity (excluding underground oil and gas reserves and related facilities and mineral reserves), cost of sales, and depreciation expense.

The estimated cost of replacement is based on the hypothetical assumption that the Company would replace its inventories and productive capacity at the end of the year without regard as to whether such replacement was economically desirable or physically possible, or whether funds were available to finance such replacement. Therefore, the data should not be interpreted to indicate that the Company actually has plans to replace its inventories or productive capacity in its existing configuration, or that actual replacement would or could take place. Decisions on replacement will be made in the normal course of business, and will consider economic, regulatory and competitive conditions at the time.

Management strongly emphasizes that the replacement cost data are not intended to be in any way indicative of the current value of the assets to the Company nor of amounts at which the assets could be sold. Additionally, the data should not be used in a simplistic manner to develop the worth of the Company or a revised income figure. Any figures so derived could be misleading without taking into account many additional considerations.

Replacement cost data were estimated primarily by the use of engineering estimates and current costs of facilities to replace existing capacities or market existing volumes. Labor, maintenance and utility costs would decrease if capacity were replaced as assumed. However, such decrease would not be material in relation to total cost of products sold.

UNION OIL COMPANY OF CALIFORNIA AND CONSOLIDATED SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(All data with respect to the six months ended June 30, 1977 and 1978 are unaudited)

Note 22 — Estimated Current Replacement Cost Data (Unaudited) (Continued)

Reported historical cost data, amounts subject to replacement cost estimates (which include leased facilities, exclude facilities under construction, certain land, mineral reserves, and oil and gas reserves and facilities) and related replacement cost estimates are as follows:

	Millions of Dollars		
	Historical Cost		
	Per Financial Statements	Subject to Replacement Cost	Estimated Replacement Cost
Properties at December 31, 1977			
Petroleum operations:			
Exploration and production.....	\$3,711	\$ 21	\$ 37
Refining, marketing and transportation.....	1,687	1,761	4,603
Total.....	5,398	1,782	4,640
Chemical operations.....	490	363	814
Minerals operations.....	195	86	170
Other.....	127	140	321
Total.....	6,210	2,371	5,945
Less: accumulated depreciation and other allowances.....	3,243	1,022	2,821
Net Investment.....	\$2,967	\$1,349	\$3,124
Depreciation, depletion and amortization expense;			
1976.....	\$484	\$ 84	\$186
1977.....	\$456	\$ 93	\$221
Inventories at December 31, 1977.....	\$437	\$437	\$724

Cost of products sold for 1976 and 1977 using inventory replacement cost data would not be materially higher than that reflected in the consolidated financial statements, since current costs are charged against earnings primarily under the last-in, first-out inventory method.

Note 23 — Affiliated Companies

Dividends received from affiliates, in million of dollars, were: \$11.5 in 1973, \$10.2 in 1974, \$10.0 in 1975, \$17.6 in 1976, \$16.8 in 1977, \$9.0 in the six months ended June 30, 1977 and \$8.0 in the six months ended June 30, 1978.

Note 24 — Changes to Oil and Gas Financial Accounting

In December, 1977, the Financial Accounting Standards Board issued a Statement which establishes standards of accounting and reporting for oil and gas producers. When implemented, certain modifications will be required in the Company's present accounting policies. It is estimated that such accounting changes will not have a significant impact upon the Company's financial reporting.

SILVER BELL INDUSTRIES, INC.
(A Development Stage Corporation)

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REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

To the Stockholders and Board of Directors of
Silver Bell Industries, Inc.:

We have examined the balance sheet of Silver Bell Industries, Inc. (a development stage corporation) as of March 31, 1978, and the related statements of operations, changes in financial position, and stockholders' equity for each of the three years in the period ended March 31, 1978 and cumulative from January 1, 1966 (date of inception of the development stage) to March 31, 1978. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The statement of stockholders' equity for the period July 31, 1944 (date of incorporation of the predecessor) to December 31, 1965 (date preceding the inception of the development stage) is unaudited; therefore, balances for such periods included in proceeds in excess of par value and deficit accumulated since inception as of March 31, 1978 and all prior periods are unaudited.

The company has a substantial investment in unrecovered costs of mining claims and leases, and facilities and equipment. As explained in note 11 of notes to financial statements, the company has agreed, subsequent to March 31, 1978, subject to approval by the company's stockholders and certain other requirements, to sell substantially all of the company's assets to another company. Recovery of the company's investment is dependent upon either the ultimate approval of the aforementioned agreement and successful consummation of the sale or the successful development of its properties.

In our report dated June 30, 1977, our opinion on the 1977 and 1976 financial statements was qualified as being subject to the outcome of certain significant litigation. As explained in note 10 of notes to financial statements, the litigation has been settled without a significant adverse impact on the financial position of the company. Accordingly, our present opinion on the 1977 and 1976 financial statements, as presented herein, is different from that expressed in our previous report with respect to the effects of significant litigation.

In our opinion, subject to the ultimate realization of the assets referred to in the second preceding paragraph, the aforementioned financial statements present fairly the financial position of Silver Bell Industries, Inc. at March 31, 1978, and the results of its operations and changes in its financial position for each of the three years in the period ended March 31, 1978 and cumulative from January 1, 1966 (date of inception of the development stage) to March 31, 1978, in conformity with generally accepted accounting principles applied on a consistent basis.

COOPERS & LYBRAND

2300 Prudential Plaza
Denver, Colorado
June 19, 1978

SILVER BELL INDUSTRIES, INC.
(A Development Stage Corporation)

BALANCE SHEET

As of March 31, 1978

ASSETS

Current assets:	
Cash.....	\$ 70,966
Accounts receivable.....	
Note receivable (Note 3).....	46,000
Accrued interest receivable.....	3,158
Prepaid expenses.....	181
Prepaid officer's bonus (Note 9).....	28,600
Total current assets.....	148,905
Unrecovered costs of mining claims and leases (Notes 7 and 10).....	4,286,956
Facilities and equipment, at cost	
Milling facilities.....	230,835
Mining equipment.....	158,319
Other.....	31,290
	420,444
Less accumulated depreciation.....	258,898
	161,546
Deferred charges and other.....	9,704
	<u>\$4,607,111</u>

LIABILITIES AND STOCKHOLDERS' EQUITY

Current liabilities:	
Accounts payable.....	\$ 9,563
Accrued payroll and payroll taxes.....	2,795
Total current liabilities.....	12,358
Notes payable (Note 4).....	62,070
Commitments and contingencies (Notes 5 and 11)	
Stockholders' equity:	
Common stock, par value \$.25 per share (Notes 6 and 9):	
7,700,000 shares authorized, 7,572,388 shares issued and	
7,568,388 shares outstanding.....	1,893,097
Proceeds in excess of par value, net of deficit accumulated since inception.....	2,651,586
	4,544,683
Less cost of 4,000 shares of treasury stock.....	12,000
Total stockholders' equity.....	4,532,683
	<u>\$4,607,111</u>

The accompanying notes are a part of these financial statements.

SILVER BELL INDUSTRIES, INC.
(A Development Stage Corporation)

STATEMENTS OF OPERATIONS

	For the Year Ended March 31, 1976	For the Year Ended March 31, 1977	For the Year Ended March 31, 1978	Cumulative Amounts From January 1, 1966 (Date of Inception of the Development Stage) to March 31, 1978 (See Note 1)
Revenues:				
Revenue from assignments.....	\$ 11,354	\$ 100,000	\$ 62,087	\$ 206,829
Proceeds from sales of mining claims and leases.....				231,000
Sales of ore produced in the process of exploration.....	24,719			1,170,521
Royalty income.....	17,394	29,701	28,711	92,451
Interest income.....	4,088	6,205	3,428	23,583
Net gain on sale of land and equipment.....		97,389		181,596
Property evaluation fees.....			25,000	25,000
Other.....	13,875	10,183	4,023	76,015
	<u>71,430</u>	<u>243,478</u>	<u>123,249</u>	<u>2,006,995</u>
Expenses:				
Exploration expense.....	63,344	37,427	33,812	2,314,280
General and administrative expense (Note 9).....	115,322	330,219	220,672	1,751,240
Cost of mining claims and leases sold.....				91,639
Cost of mining claims and leases abandoned or lost.....	19,680	67,195	99,500	435,370
Interest expense.....	52,984	43,878	4,704	337,189
Depreciation.....				130,312
Other.....	38,223	44,692	45,727	136,642
	<u>289,553</u>	<u>523,411</u>	<u>404,415</u>	<u>5,196,672</u>
Net loss.....	<u>\$(218,123)</u>	<u>\$(279,933)</u>	<u>\$(281,166)</u>	<u>\$(3,189,677)</u>
Net loss per share of common stock (Note 8).....	<u>\$ (0.04)</u>	<u>\$ (0.05)</u>	<u>\$ (0.04)</u>	

The accompanying notes are a part of these financial statements.

SILVER BELL INDUSTRIES, INC.
(A Development Stage Corporation)

STATEMENTS OF CHANGES IN FINANCIAL POSITION

	For the Year Ended March 31, 1976	For the Year Ended March 31, 1977	For the Year Ended March 31, 1978	Cumulative Amounts From January 1, 1966 (Date of Inception of the Development Stage) to March 31, 1978 (See Note 1)
Sources of working capital:				
Common stock issued for cash or notes payable, plus interest.....	\$	\$ 650,747	\$246,501	\$2,453,584
Common stock issued for acquisitions of properties and in payment of expenses.....		658,989	680,000	4,755,958
Increase in long-term notes payable.....	50,000	790		1,155,104
Increase in convertible notes payable.....				401,989
Decrease in investments.....		98,086		147,930
Decrease in note receivable.....	46,550			68,928
Decrease in deferred charges and other assets.....		603		8,884
	<u>96,550</u>	<u>1,409,215</u>	<u>926,501</u>	<u>8,992,377</u>
Applications of working capital:				
Used in operations:				
Net loss.....	218,123	279,933	281,166	3,189,677
Add expenses not requiring an outlay of working capital:				
Depreciation.....				(130,312)
Mining claims and leases abandoned or lost.....	(19,680)	(67,195)	(99,500)	(435,370)
Net book value of facilities and equipment written off.....		(12,814)	(1,500)	(39,225)
Add proceeds under assignments credited against mining claims and leases.....	(112,346)	(65,000)	(67,913)	(445,321)
	<u>86,097</u>	<u>134,924</u>	<u>112,253</u>	<u>2,139,449</u>
Acquisition of mining claims and leases.....	5,100	614,332	671,773	4,679,973
Acquisition of facilities and equipment.....			74	288,262
Decrease in long-term notes payable.....	241,666	59,164		1,093,034
Decrease in convertible notes payable.....	24,684	128,580		401,989
Purchase of treasury stock.....	12,000			12,000
Increase in investments.....	5			122,217
Increase in notes receivable.....				68,928
Increase in deferred charges and other assets.....	15		5,197	18,588
	<u>369,567</u>	<u>937,000</u>	<u>789,297</u>	<u>8,824,440</u>
Increase (decrease) in working capital.....	(273,017)	472,215	137,204	167,937
Working capital (deficit) beginning of period.....	(199,855)	(472,872)	(657)	(31,390)
Working capital (deficit) end of period.....	<u>\$(472,872)</u>	<u>\$ (657)</u>	<u>\$136,547</u>	<u>\$ 136,547</u>
Summary of changes in components of working capital:				
Increase (decrease) in current assets:				
Cash.....	(523)	1,152	65,603	59,697
Accounts receivable.....	3,239	(5,247)	(353)	
Notes receivable.....	(60,000)	46,000		46,000
Accrued interest receivable.....	515	1,160	393	3,158
Prepaid expenses.....	50	99	(154)	181
Prepaid officer's bonus.....		36,250	(7,650)	28,600
Inventories.....	(9,876)			
Unregistered securities.....	(80,000)			
	<u>(146,595)</u>	<u>79,414</u>	<u>57,839</u>	<u>137,636</u>
Increase (decrease) in current liabilities:				
Accounts payable.....	(12,605)	(8,479)	(44,001)	9,563
Notes payable.....	121,496	(339,674)		(39,500)
Accrued interest payable.....	(7,319)	(34,616)	(891)	(1,358)
Accrued payroll and payroll taxes.....	(6,764)	32,081	(30,709)	2,795
Advances from stockholders.....	13,740	(13,740)		
Other current liabilities.....	17,874	(28,373)	(3,764)	(1,801)
	<u>126,422</u>	<u>(392,801)</u>	<u>(79,365)</u>	<u>(30,301)</u>
Increase (decrease) in working capital.....	<u>\$(273,017)</u>	<u>\$ 472,215</u>	<u>\$137,204</u>	<u>\$ 167,937</u>

The accompanying notes are a part of these financial statements.

SILVER BELL INDUSTRIES, INC.
(A Development Stage Corporation)

STATEMENTS OF STOCKHOLDERS' EQUITY

(Note A)

	Class A Stock at Par Value	Common Stock		Proceeds In Excess of Par Value	(Deficit) Accumulated Since Inception	Total Proceeds In Excess of Par Value Net of Deficit Accumulated Since Inception	Treasury Stock	Total Stockholders' Equity
		Shares	Par Value					
For the period July 31, 1944 (date of incorporation of the predecessor) to December 31, 1965 (date preceding the inception of the development stage) (Unaudited):								
Issued for cash and notes payable (\$0.25 to \$2.25 per share).....	\$277,500	1,394,277	\$ 1,394,277	\$ 460,388		\$ 460,388		\$2,132,165
Conversion of Class A shares.....	(194,426)	194,426	194,426					
Issued for mining claims and leases.....		456,551	456,551					456,551
Issued in payment of general and administrative expenses.....		47,500	47,500					47,500
Net (loss).....					\$(2,111,398)	(2,111,398)		(2,111,398)
Balance at December 31, 1965.....	<u>83,074</u>	<u>2,092,754</u>	<u>2,092,754</u>	<u>460,388</u>	<u>(2,111,398)</u>	<u>(1,651,010)</u>		<u>524,818</u>
For the period January 1, 1966 (date of inception of the development stage) to March 31, 1975:								
A. January 1, 1966 to October 31, 1969 (effective date of acquisition of predecessor by successor):								
Reduction of par from \$1.00 per share to \$0.25 per share.....	(62,306)		(1,569,565)	1,631,871		1,631,871		
Issued in payment of notes payable plus accrued interest.....		600,403	150,100	371,313		371,313		521,413
Issued to stockholders of Silver Clad Mines, Inc.....		212,005	53,001	282,874		282,874		335,875
Conversion of Class A shares.....	(20,768)	83,072	20,768	(5,770)		(5,770)		(5,770)
Issued for mining claims and leases.....		352,060	88,015	872,909		872,909		960,924
Issued in payment of general and administrative expenses.....		80,750	20,188	59,713		59,713		79,901
Purchase of 500 shares of Treasury stock, at cost.....							\$ (125)	(125)
Net (loss).....					(639,829)	(639,829)		(639,829)
Total for the period January 1, 1966 to October 31, 1969.....	<u>(83,074)</u>	<u>1,328,290</u>	<u>(1,237,493)</u>	<u>3,212,910</u>	<u>(639,829)</u>	<u>2,573,081</u>	<u>(125)</u>	<u>1,252,389</u>
Balance at October 31, 1969 before acquisition of predecessor by successor (Note A).....	<u>\$ —</u>	<u>3,421,044</u>	<u>\$ 855,261</u>	<u>\$3,673,298</u>	<u>\$(2,751,227)</u>	<u>\$ 922,071</u>	<u>\$ (125)</u>	<u>\$1,777,207</u>

SILVER BELL INDUSTRIES, INC.
(A Development Stage Corporation)

STATEMENTS OF STOCKHOLDERS' EQUITY (Continued)

(Note A)

	Class A Stock at Par Value	Common Stock		Proceeds In Excess of Par Value	(Deficit) Accumulated Since Inception	Total Proceeds In Excess of Par Value Net of Deficit Accumulated Since Inception	Treasury Stock	Total Stockholders' Equity
		Shares	Par Value					
I. For the period January 1, 1966 (date of inception of the development stage) to March 31, 1975, continued:								
B. Issued by Silver Bell Industries, Inc., effective October 31, 1969, for net assets of predecessor.....		3,421,044	\$ 855,261	\$3,673,298	\$(2,751,227)	\$ 922,071	\$ (125)	\$1,777,207
Balance at October 31, 1969 (Note A).....		3,421,044	855,261	3,673,298	(2,751,227)	922,071	(125)	1,777,207
C. November 1, 1969 to March 31, 1975:								
Issued for cash (\$0.75 to \$1.50 per share).....		439,139	109,785	346,519		346,519		456,304
Exercise of stock options.....		68,333	17,083	34,166		34,166		51,249
Issued in payment of notes payable plus accrued interest.....		592,408	148,102	385,038		385,038		533,140
Issued for mining claims and leases.....		1,367,500	341,875	1,643,725		1,643,725		1,985,600
Issued in payment of: Exploration expenses.....		22,200	5,550	19,700		19,700		25,250
General and administrative expenses.....		4,146	1,037	28,507		28,507		29,544
Retirement of 500 shares of Treasury stock, at cost.....		(500)	(125)				125	
Net (loss).....					(1,770,626)	(1,770,626)		(1,770,626)
Total for the period November 1, 1969 to March 31, 1975.....		2,493,226	623,307	2,457,655	(1,770,626)	687,029	125	1,310,461
Balance at March 31, 1975 (Note A).....		5,914,270	1,478,568	6,130,953	(4,521,853)	1,609,100	—	3,087,668
II. For the year ended March 31, 1976:								
Purchase of 4,000 shares of Treasury stock, at cost.....							(12,000)	(12,000)
Net (loss).....					(218,123)	(218,123)		(218,123)
Total for the year ended March 31, 1976.....					(218,123)	(218,123)	(12,000)	(230,123)
Balance at March 31, 1976 (Note A), forward.....		5,914,270	1,478,568	6,130,953	(4,739,976)	1,390,977	(12,000)	2,857,545

SILVER BELL INDUSTRIES, INC.
(A Development Stage Corporation)

STATEMENTS OF STOCKHOLDERS' EQUITY (Continued)

(Note A)

	Class A Stock at Par Value	Common Stock		Proceeds in Excess of Par Value	(Deficit) Accumulated Since Inception	Total Proceeds in Excess of Par Value Net of Deficit Accumulated Since Inception	Treasury Stock	Total Stockholders' Equity
	Shares	Par Value						
For the year ended March 31, 1977:								
Issued in payment of notes payable plus accrued interest.....	547,830	\$ 136,957	\$ 416,895		\$ 416,895			\$ 553,852
Exercise of stock options.....	96,732	24,183	70,217		70,217			94,400
Issued for mining claims and leases (Note B).....	330,269	82,567	542,444		542,444			625,011
Issued in payment of:								
Interest on deposits.....	2,639	660	1,835		1,835			2,495
Exploration expenses.....	2,500	625	4,625		4,625			5,250
General and administrative expenses.....	13,680	3,420	25,308		25,308			28,728
Net (loss).....				\$ (279,933)	(279,933)			(279,933)
Total for the year ended March 31, 1977.....	993,650	248,412	1,061,324	(279,933)	781,391			1,029,803
Balance at March 31, 1977 (Note A).....	6,907,920	1,726,980	7,192,277	(5,019,909)	2,172,368	(12,000)		3,887,348
For the year ended March 31, 1978:								
Exercise of stock options.....	264,468	66,117	180,384		180,384			246,501
Issued for mining claims and leases (Note B).....	400,000	100,000	580,000		580,000			680,000
Net (loss).....				(281,166)	(281,166)			(281,166)
Total for the year ended March 31, 1978.....	664,468	166,117	760,384	(281,166)	479,218			645,335
Balance at March 31, 1978 (Note A).....	7,572,388	\$ 1,893,097	\$7,952,661	\$(5,301,075)	\$2,651,586	\$(12,000)		\$4,532,683

Note A: Amounts applicable to Class A shares, proceeds in excess of par value and deficit accumulated since inception for all periods preceding January 1, 1966 (date of inception of the development stage) have not been audited. Records of the predecessor companies are not complete and the details are not subject to audit. Transactions from January 1, 1966 to March 31, 1978 have been audited. (See Note 1).

Note B: Includes totals of \$42,727 in 1978 and \$33,378 in 1977 for properties sold in previous years which amounts were expensed currently.

The accompanying notes are a part of these financial statements.

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS

1. Organization and Status of the Company:

Silver Bell Mines Co., the predecessor to Silver Bell Industries, Inc., was incorporated in Colorado on July 31, 1944. During the period from 1944 to 1954, the company acquired certain mining claims located near Ophir, Colorado, developed the properties and mined ore which was processed in a mill constructed by the company. Substantial operating losses were incurred, and in 1954 the company ceased operations. From 1954 to 1965, the company was relatively inactive.

In 1966, Silver Bell Mines Co. was reactivated and commenced claim acquisition and evaluation work on a limited basis. In 1967 the company acquired additional claims and commenced exploration. This claim acquisition and exploration activity continued through 1968. Also during 1968, the company completed substantial repair and rehabilitation of its milling facilities. In 1969, the company started processing ore produced incidental to exploration of certain properties owned by Silver Clad Mines, Inc. (Silver Clad was acquired in a stock-for-assets exchange by Silver Bell Mines Co. in August 1969, with the transaction accounted for on a pooling-of-interests basis.)

Silver Bell Industries, Inc. was incorporated in Colorado on September 15, 1969 for the purpose of acquiring the net assets of Silver Bell Mines Co. This acquisition was approved by the stockholders of Silver Bell Mines Co. on October 30, 1969, and became effective on October 31, 1969.

In November 1972, Silver Bell Industries, Inc. acquired substantially all of the assets (primarily undeveloped uranium mining claims and leases) and assumed substantially all of the liabilities of Petro-Nuclear Ltd. in a nontaxable transaction for 1,200,000 shares of the company's common stock. (The transaction was accounted for as a purchase for reporting purposes.) In addition, subject to stockholder approval of an increase in the authorized shares of Silver Bell Industries, Inc. and subject to certain other matters, the company agreed to issue to the former stockholders of Petro-Nuclear Ltd. up to a maximum of 800,000 additional shares of common stock. During fiscal 1976, the company became involved in litigation concerning this acquisition. During fiscal 1977 the stockholders of Silver Bell Industries, Inc. approved an increase in the authorized shares of the company. The company reached settlements during fiscal 1977 with certain, but not all, of the former shareholders of Petro-Nuclear Ltd., and subsequently settled with the remaining former shareholders of Petro-Nuclear Ltd. during fiscal 1978. This transaction and associated litigation is further discussed in note 10.

As of March 31, 1978 the company was involved in discussions and negotiations with another company relative to a potential sale of substantially all of Silver Bell's assets to such other company. Such discussions and negotiations constituted the primary activities in which the company was engaged as of March 31, 1978.

See note 11 for subsequent event.

2. Summary of Significant Accounting Policies:

Unrecovered Costs of Mining Claims and Leases:

Mining claims and leases are carried at cost. The cost of those claims and leases acquired with cash or its equivalent is the amount of cash or its equivalent given for such properties. The costs of those claims and leases acquired through the issuance of common stock is the estimated fair value of the stock given for such properties at the time such properties are acquired.

Gain or loss on sales of mining claims and leases is included in income. When an interest is retained in a property which is sold, the cost of the property is allocated between the interest retained

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS (Continued)

2. Summary of Significant Accounting Policies (Continued):

and the interest sold on the basis of their respective estimated fair values. Gain or loss is recognized equal to the difference between the cost allocated to the interest sold and the related proceeds of sale. A transaction wherein the company nominally sells mining claims and leases is accounted for as an assignment of an operating interest if certain factors are included in the contract. See *assignments* below.

Option payments received on mining claims and leases pursuant to an agreement which only provides that the optionee may subsequently elect to purchase the optioned property are recorded as deferred credits. If the option is not exercised by the optionee, the payments which have been received are credited to income in the period the option expires. If the option is exercised by the optionee, the payments which have been received are included as part of the sales price. An option agreement which provides that the optionee may both explore the property and may subsequently elect to purchase the optioned property is accounted for as an assignment. See *assignments* below. Payments received from a potential purchaser for the right to inspect the accounting and geological records of the company are credited to income as property evaluation fees when the agreed upon inspection period has ended.

Assignments of mining claims and leases include not only those transactions which are direct assignments, but may also include transactions which are in the form of sales agreements and transactions which are in the form of option agreements. Those transactions which include all of the following factors are recorded as assignments:

- The company may receive additional amounts under the contract as a result of elective completion of the terms of the contract by the other party to the transaction.
- The other party to the transaction has the right, subsequent to the date of the contract, to explore and/or develop the property.
- Failure of the other party to the transaction to complete the terms of the contract will result in reacquisition by the company of all of its pre-contract ownership interests in the subject claims and leases.

When all of the above factors are present, a transaction is recorded as an assignment of a property interest.

Under an assignment, a substantial portion of the proceeds which may be received by the company is dependent upon the elective continuation in the arrangement by the assignee. Accordingly, the fair value of potential future proceeds to be received cannot be determined. Any nonrefundable amounts (including any nonrefundable amounts which may be recoverable by the payor out of potential future production) are credited to the carrying value of the property. Amounts received prior to production in excess of the carrying value of the property are credited to income. If production commences, any subsequent production payments received by the company are credited to income and the remaining carrying value of the claims or leases, if any, is amortized over future estimated production.

The costs of abandoned mining claims and leases constituting an entire area of interest are charged to income. The costs of abandoned mining claims and leases which are deemed nonessential to a retained area of interest are allocated to the retained acreage.

Facilities and Equipment:

Facilities and equipment are carried at cost. The cost of facilities and equipment acquired with cash or its equivalent is the amount of cash or its equivalent given for such properties. The cost of

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS (Continued)

2. Summary of Significant Accounting Policies (Continued):

facilities and equipment acquired through the issuance of common stock is the estimated fair value of the stock given for such properties at the time such properties are acquired. Maintenance and repairs are charged against income as incurred. Expenditures for major betterments are capitalized. Gain or loss on retirement or disposition of facilities and equipment is included in income.

As a result of a shutdown of milling and mining operations during the years ended March 31, 1976, 1977, and 1978, no depreciation on facilities and equipment has been charged to income for those periods.

Except for \$15,000 of fire insurance on milling facilities, the company is self-insuring its facilities and equipment.

Exploration and Development:

Exploration costs (those expenditures incurred in the search for and definition of commercially recoverable reserves) are charged against income as incurred. Development costs (those expenditures incurred in connection with bringing a property into production after it has been determined that a commercially recoverable reserve exists on the property) are capitalized to the related property.

3. Note Receivable:

The note receivable is from a Director and Officer. On May 11, 1976, the Board of Directors authorized the sale of undeveloped real estate (which had a carrying value of \$98,086) to a Director and Officer for a total consideration of \$196,000 which was considered by the company to approximate fair value. The sale was finalized on June 30, 1976. Consideration was comprised of a \$100,000 down payment and a 7% note for \$96,000. Payment of \$50,000 plus accrued interest was received by the company on March 31, 1977 and \$46,000 plus accrued interest receivable was due March 31, 1978. Interest was received through March 31, 1978, and the due date has been extended until February 1, 1979. The unpaid balance is collateralized by a Note and Deed of Trust on the undeveloped real estate which was sold.

4. Notes Payable:

Notes payable as of March 31, 1978 consist of the following:

7% uncollateralized note; dated March 29, 1974 and originally due April 30, 1975; extended at various times; as of March 31, 1978 the note was due April 30, 1978, but subsequent to the balance sheet date the note was extended to April 30, 1979.....	\$12,070
7% uncollateralized note; dated September 6, 1973 and originally due September 6, 1974; extended at various times, most recently providing that the note is payable in its entirety plus interest on May 31, 1979.....	50,000
	<u>\$62,070</u>

5. Commitments and Contingencies:

The assets acquired from Petro-Nuclear Ltd. (see note 10) include an approximate 35% interest in a joint venture formed to explore and develop certain uranium properties in Wyoming. The company is responsible for its proportionate share of the capital expenditures for the mining and

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS (Continued)

5. Commitments and Contingencies (Continued):

milling of uranium reserves on the properties, but may elect to have such expenditures carried by the operator and amortized from 90% of the production attributable to its interest. The company has been informed by the operator that it has been carried for approximately \$10,271,000 of expenditures as of March 31, 1978. This amount has not been reflected in the financial statements.

The company is committed to make an annual payment of \$20,000 for certain mining claims pursuant to a May 1970 option agreement (amended in January 1972). Through March 31, 1978, the company has met the requirements of the agreement, as amended. Pursuant to this agreement, future option payments totaling \$100,000 are required relative to these claims. This amount is not reflected in the balance sheet as of March 31, 1978. In addition, the company is committed to make annual payments totaling \$3,600 for certain other mining claims pursuant to the above noted agreement. Pursuant to this agreement, future option payments of approximately \$77,500 are required relative to these claims. This amount is not reflected in the balance sheet as of March 31, 1978. If all of the above minimum option payments are not made, the claims revert to the original owner.

Under current agreements the required annual assessment work to maintain rights in most of the unpatented mining claims will be performed by others.

See note 6 for data as to common stock reserved and contingently issuable.

In connection with option, sale and assignment agreements relative to certain of the company's mining claims and leases, the company may receive additional proceeds in the form of option payments and minimum, advance and production royalties in the future.

6. Common Stock Reserved and Contingently Issuable:

Stock Options:

At March 31, 1976, options to buy 361,200 shares of the company's common stock were outstanding to certain stockholders of the company. During the fiscal year ended March 31, 1977 no additional options were granted and options for 96,732 shares were exercised (9,332 and 87,400 for \$.75 and \$1.00, respectively, per share).

As of March 31, 1977, options to buy 264,468 shares of the company's common stock were outstanding to certain stockholders of the company. Included therein were options for 30,000 shares at \$1.00 per share outstanding to a Director and Officer of the company. The options were granted in connection with the acquisition of mining claims and leases and in connection with certain financing arrangements. At various times the expiration dates of these options have been extended, and as of March 31, 1977, they were due to expire on September 30, 1977. Data relative to these options as of March 31, 1977 follows:

Initial Fiscal Year Option Granted	Option Price			Totals	
	<u>\$.75</u>	<u>\$1.00</u>	<u>\$1.25</u>	<u>Shares</u>	<u>Dollars</u>
1971.....			22,800	22,800	\$ 28,500
1972.....			6,000	6,000	7,500
1973.....	130,668		50,000	180,668	160,501
1975.....	20,000	35,000		55,000	50,000
Totals.....	<u>150,668</u>	<u>35,000</u>	<u>78,800</u>	<u>264,468</u>	<u>\$246,501</u>

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS (Continued)

6. Common Stock Reserved and Contingently Issuable (Continued):

Option prices at the date of the grants were established by the Board of Directors. The options were exercisable at the dates of the grants, or thereafter, and in certain cases (including all extensions during fiscal 1977) were subject to the availability of authorized and unissued stock. All material option grants were made at prices equal to or in excess of estimated fair value of the stock. Accordingly, there have been no charges to income in connection with the options granted.

During fiscal 1978, some of the above options were extended to March 15, 1978, and options to purchase the entire 264,468 shares were exercised at the prices indicated in the above table. There were no options outstanding at March 31, 1978.

Pending Acquisition:

On September 6, 1973 the company entered into an interim agreement to acquire all of the assets (primarily notes receivable and unpatented, patented and placer mining claims) of The Mancos Corporation in exchange for 125,000 shares of the company's common stock. The Mancos Corporation has loaned the company \$50,000 which is evidenced by a 7% uncollateralized note, originally due September 6, 1974, which has been extended at various times and is now due May 31, 1979. The interim agreement with The Mancos Corporation provided, among other things, that subsequent to the date of the agreement and prior to closing on the agreement, Silver Bell would not issue any stock. Silver Bell issued stock subsequent to the date of the interim agreement, however, management indicated that Mancos verbally agreed to waive the prohibition regarding stock issuance. Accordingly, 125,000 shares of Silver Bell were contingently issuable in connection with this proposed transaction at March 31, 1978.

See note 11 for subsequent event.

7. Income Taxes

As of March 31, 1978, the company has accumulated operating losses for tax purposes of approximately \$1,239,000 which amount is available for deduction from taxable income of future years. If not utilized, these estimated tax loss carryforwards will expire as follows:

<u>Expires March 31,</u>	<u>Amount</u>
1979.....	\$ 197,000
1980.....	263,000
1983.....	139,000
1984.....	245,000
1985.....	395,000
	<u>\$1,239,000</u>

Tax returns for the years in which these estimated loss carryovers were created have not been examined by the Internal Revenue Service.

The company uses the flow through method of accounting for investment tax credits under which the allowable credit is recorded as a reduction of the provision for federal income taxes in the

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS (Continued)

7. Income Taxes (Continued):

year in which such credits are utilized. Unused investment tax credits amount to approximately \$2,000 at March 31, 1978.

Operations for the years ended March 31, 1976, 1977 and 1978 resulted in losses for both book and tax purposes. Therefore, no provision for income taxes is required.

The book basis of unrecovered costs of mining claims and leases exceeds the estimated tax basis by approximately \$2,700,000 at March 31, 1978.

8. Net Loss Per Share of Common Stock:

Net loss per share is based upon the weighted average number of shares outstanding of 5,911,270 for the year ended March 31, 1976, 6,067,308 for the year ended March 31, 1977 and 7,201,709 for the year ended March 31, 1978.

9. Related Party Transactions:

Mr. Eugene H. Sanders, President and Treasurer and a major stockholder of Silver Bell Industries, Inc. has effected various transactions with the company during the three years ended March 31, 1978. The most significant of these transactions are as follows:

Convertible Notes Payable:

Convertible notes were issued to Mr. Sanders at various times from 1970 through 1975. The notes were issued for cash loans made by Mr. Sanders to the company. The notes had interest rates of 7% to 10%. At March 31, 1976, the principal amounts of the notes totaled \$326,605. During fiscal 1977, these notes, plus accrued interest thereon, were converted by Mr. Sanders into 362,190 shares of common stock.

Stock Options:

As described in note 6, options to purchase 264,468 shares of common stock were exercised during fiscal 1978. Mr. Sanders purchased a total of 30,000 of these shares during fiscal 1978 at \$1.00 per share. During fiscal 1977, Mr. Sanders purchased 20,000 shares under similar option agreements. Market values of the stock at the dates of exercise were \$1.65 per share (10,500 shares) and \$2.10 per share (19,500 shares) and \$58,275 in total in fiscal 1978, and \$1.75 per share and \$35,000 in total in fiscal 1977. There were no options outstanding at March 31, 1978.

Bonus:

Pursuant to resolutions by the Board of Directors, bonuses of \$50,000 in fiscal 1978 and \$150,000 in fiscal 1977 were authorized to a Director and Officer of the company (Mr. Sanders). The bonuses declared were applicable to more than one fiscal year, and certain amounts were prepaid at the end of each fiscal year. Accordingly, \$77,650 was charged to expense in fiscal 1978 and \$28,600 has been reported as prepaid officer's bonus at March 31, 1978, and \$93,750 was charged to expense in fiscal 1977.

Sale of Undeveloped Real Estate:

As described in note 3, certain undeveloped real estate was sold to a Director and Officer of the company (Mr. Sanders) during fiscal 1977.

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS (Continued)

9. Related Party Transactions (Continued):

Various members of the Board of Directors effected transactions with the company during the three years ended March 31, 1978. A summary of the most significant of these transactions follows:

Convertible Notes Payable:

Convertible notes were issued in prior periods to various individuals who were members of the Board of Directors during all or part of fiscal 1977. The notes were issued primarily for cash loans, and had interest rates of 7%-10%. During fiscal 1977, all of these convertible notes (which had principal amounts totaling \$64,313 at March 31, 1976) were converted (plus interest) into 73,650 shares of common stock by individuals (excluding Mr. Sanders) who were members of the Board of Directors during all or part of fiscal 1977.

Stock Options:

Options to purchase 96,732 shares of common stock were exercised during fiscal 1977. A member of the Board of Directors (excluding Mr. Sanders) purchased 30,000 of these shares. Market value of the stock at the date of exercise was \$1.75 per share or \$52,500 in total. Excluding Mr. Sanders, none of the members of the Board of Directors had remaining options to purchase shares at March 31, 1977. As described in note 6, there were no options outstanding at March 31, 1978.

10. Litigation:

In November of 1972, the company acquired substantially all of the assets (primarily undeveloped mining claims and leases) and assumed substantially all of the liabilities of Petro-Nuclear Ltd. in a nontaxable transaction for 1,200,000 shares of the company's common stock. In addition, subject to shareholder approval of an increase in the authorized shares of the company, and subject to other matters, the company agreed to issue to the former shareholders of Petro-Nuclear Ltd. up to a maximum of 800,000 additional shares of the company's common stock.

Commencing in November 1975 the company has been involved in litigation with the former shareholders of Petro-Nuclear Ltd. involving claims and counter-claims relative to the acquisition of Petro-Nuclear Ltd.

Agreements for settlement of these lawsuits and for equitable settlements with non-litigant former shareowners of Petro-Nuclear Ltd. were entered into in December of 1976. Two agreements provided for the issuance and delivery of a total of 280,269 shares of Silver Bell stock to certain litigants in final settlement and to certain non-litigants in equitable settlement of all asserted or potential claims relative to their interests in the Petro-Nuclear Ltd. acquisition. A contingent agreement with the remaining former shareholders of Petro-Nuclear Ltd. provided for the issuance of 321,406 shares of Silver Bell stock and promissory notes totaling \$128,284 in settlement. The 321,406 shares and the notes were placed in escrow.

The conditions of the contingent agreement were not met and, accordingly, the contingent agreement with the remaining former shareholders of Petro-Nuclear Ltd. became of no force and effect. The 321,406 shares and the notes were removed from escrow in April of 1977.

In September of 1977, an agreement for settlement of the lawsuit was entered into with the remaining former shareholders of Petro-Nuclear, Ltd. The agreement provided for the issuance and delivery of a total of 400,000 shares of Silver Bell stock to the remaining litigants in final settlement

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

NOTES TO FINANCIAL STATEMENTS (Continued)

10. Litigation (Continued):

of all asserted or potential claims relative to their interests in the Petro-Nuclear Ltd. acquisition. Such shares were issued and delivered on September 29, 1977.

As a result of the above, there is no remaining litigation with respect to the Petro-Nuclear Ltd. acquisition as of March 31, 1978.

The estimated fair market values at the times of issuance of the shares of common stock issued during fiscal 1978 and 1977 for final settlement with all of the litigants in the Petro-Nuclear Ltd. litigation, as described above, have been charged to the mining claims and leases account (and credited to appropriate stockholders' equity) during the appropriate year. To the extent that properties which were included in the Petro-Nuclear Ltd. acquisition have been sold in current or prior periods, amounts otherwise currently allocable to such properties have been charged to income during both fiscal 1978 and 1977.

11. Subsequent Events:

The following significant events occurred subsequent to March 31, 1978:

Sale of the Company:

As of May 15, 1978, the company entered into an agreement and plan of reorganization with Union Oil Company of California (Union) and Minerals Exploration Company (Minerals), a wholly-owned subsidiary of Union. The agreement provides for the transfer of substantially all of the assets of the company to Minerals in exchange for 418,095 shares of Union common stock and the assumption by Minerals of certain liabilities and obligations of the company. The transaction is intended to qualify under Section 368(a)(1)(C) of the Internal Revenue Code of 1954 as an exchange tax-free to the company. Pursuant to this agreement, certain information will be filed with the Securities and Exchange Commission to complete this transaction, and the agreement requires approval by at least two-thirds of the holders of the company's outstanding common stock. If the agreement is approved, the Union stock will be distributed to the stockholders of the company according to their respective interests and Silver Bell will then be dissolved pursuant to applicable state laws.

Cancellation of Interim Agreement with The Mancos Corporation:

On June 19, 1978, the company signed a Conditional Release Agreement which provides for the cancellation of the interim agreement described in note 6. Accordingly, the 125,000 shares of Silver Bell which were contingently issuable at March 31, 1978 will not be issued. Closing and completion of the Conditional Release Agreement is dependent upon approval by Mancos, Union and Minerals of an agreement for Minerals to acquire all of the assets of Mancos in exchange for Union stock. The agreement between Mancos, Union and Minerals is contingent upon completion of the agreement between Silver Bell and Minerals, and must be approved by the holders of at least two-thirds of Mancos common stock.

SILVER BELL INDUSTRIES, INC.

(A Development Stage Corporation)

**UNAUDITED SUPPLEMENTAL INFORMATION RELATIVE TO
CASH RECEIPTS AND DISBURSEMENTS**

The following is an unaudited schedule of cash receipts and disbursements for the three month period ended June 30, 1978:

CASH RECEIPTS

Lease security deposit refunds.....	<u>\$ 420</u>
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CASH DISBURSEMENTS

General and administrative.....	\$36,264
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Exploration.....	6,230
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Other.....	<u>5,010</u>
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Total Cash Disbursements.....	<u>\$47,504</u>
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THE MANCOS CORPORATION

UNAUDITED FINANCIAL STATEMENTS

December 31, 1977, 1976, and 1975

THE MANCOS CORPORATION

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ACCOUNTANTS' DISCLAIMER OF OPINION

Board of Directors
The Mancos Corporation
Rocky Ford, Colorado

The accompanying balance sheet of The Mancos Corporation as of December 31, 1977, 1976, and 1975, and the related statements of operations, accumulated deficit and changes in financial position for the years then ended were not audited by us and accordingly we express no opinion on them.

GRIMSLEY, WHITE & COMPANY

March 2, 1978 except for Notes
3 and 6 as to which the dates
are March 31, 1978 and September
27, 1978.

THE MANCOS CORPORATION

**BALANCE SHEET
(Unaudited)**

December 31, 1977, 1976, and 1975

ASSETS

	<u>1977</u>	<u>1976</u>	<u>1975</u>
CURRENT ASSETS			
Cash in bank.....	\$ 367	\$ 2,197	\$ 1,663
Interest receivable.....	1,613	559	1,259
TOTAL CURRENT ASSETS.....	<u>1,980</u>	<u>2,756</u>	<u>2,922</u>
LAND, EQUIPMENT AND BUILDINGS (Note 1A)			
Land.....	13,417	13,417	13,417
Equipment and buildings.....	21,540	21,540	21,540
	34,957	34,957	34,957
Accumulated depreciation.....	14,946	14,946	14,946
NET LAND, EQUIPMENT AND BUILDINGS.....	<u>20,011</u>	<u>20,011</u>	<u>20,011</u>
OTHER ASSETS			
Note receivable — stockholder (Note 2).....	30,000	30,000	30,000
Note receivable — Silver Bell Industries, Inc. (Note 3).....	50,000	50,000	50,000
Development and exploration cost (Note 1B).....	133,980	133,980	133,980
Reorganization cost (Note 1C).....	9,983	9,983	9,983
TOTAL OTHER ASSETS.....	<u>223,963</u>	<u>223,963</u>	<u>223,963</u>
TOTAL ASSETS.....	<u><u>\$245,954</u></u>	<u><u>\$246,730</u></u>	<u><u>\$246,896</u></u>

LIABILITIES AND STOCKHOLDERS' EQUITY

CURRENT LIABILITIES			
Accounts payable — trade.....	\$ 100	\$ 100	\$ 100
Accrued payroll.....	356	346	348
Accrued payroll tax.....	241	262	221
Accrued property tax.....	809	955	955
Deferred interest income.....	-0-	-0-	1,797
TOTAL CURRENT LIABILITIES.....	<u>1,506</u>	<u>1,663</u>	<u>3,421</u>
STOCKHOLDERS' EQUITY			
Capital stock (Note 4).....	17,652	17,652	17,652
Paid in capital.....	362,222	362,222	362,222
Accumulated deficit.....	(135,426)	(134,807)	(136,399)
TOTAL STOCKHOLDERS' EQUITY.....	<u>244,448</u>	<u>245,067</u>	<u>243,475</u>
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY.....	<u><u>\$245,954</u></u>	<u><u>\$246,730</u></u>	<u><u>\$246,896</u></u>

These Unaudited Financial Statements Should Be Read Only In
Connection With The Accountants' Report, Footnotes And
Statements Of Accounting Policy.

THE MANCOS CORPORATION

STATEMENT OF OPERATIONS
(Unaudited)

For the Years Ended December 31, 1977, 1976, and 1975

	1977	1976	1975
INCOME			
Interest.....	\$ 5,517	\$ 7,980	\$ 5,600
Royalty income.....	203	197	351
TOTAL INCOME.....	5,720	8,177	5,951
OPERATING EXPENSES			
Accounting.....	200	275	265
Amortization.....	—0—	—0—	38
Insurance.....	155	120	—0—
Legal expense.....	15	24	32
Salaries.....	4,800	4,800	4,800
Taxes — payroll.....	418	369	302
Taxes — property.....	699	955	993
Office supplies and expense.....	47	42	41
Interest expense.....	5	—0—	—0—
TOTAL OPERATING EXPENSES.....	6,339	6,585	6,471
NET INCOME (LOSS) FOR THE YEAR.....	\$ (619)	\$ 1,592	\$ (520)
INCOME (LOSS) PER SHARE (Note 5).....	<u><u>\$ (.00035)</u></u>	<u><u>\$.0009</u></u>	<u><u>\$ (.0003)</u></u>

These Unaudited Financial Statements Should Be Read Only In
Connection With The Accountants' Report, Footnotes And
Statements of Accounting Policy.

THE MANCOS CORPORATION

STATEMENT OF ACCUMULATED DEFICIT
(Unaudited)

For the Years Ended December 31, 1977, 1976, and 1975

	<u>1977</u>	<u>1976</u>	<u>1975</u>
ACCUMULATED DEFICIT — January 1.....	\$(134,807)	\$(136,399)	\$(135,879)
Net income (loss) for the year ended December 31.....	(619)	1,592	(520)
ACCUMULATED DEFICIT — December 31.....	<u>\$135,426</u>	<u>\$(134,807)</u>	<u>\$(136,399)</u>

These Unaudited Financial Statements Should Be Read Only In
Connection With The Accountants' Report, Footnotes And
Statements of Accounting Policy.

THE MANCOS CORPORATION

STATEMENT OF CHANGES IN FINANCIAL POSITION
(Unaudited)

For the Years Ended December 31, 1977, 1976, and 1975

	<u>1977</u>	<u>1976</u>	<u>1975</u>
FINANCIAL RESOURCES WERE PROVIDED BY:			
Net income for the period.....	\$ -0-	\$ 1,592	\$ -0-
FINANCIAL RESOURCES WERE USED FOR:			
Net loss for the period.....	(619)	-0-	(520)
Less expenses not requiring outlay of current working capital — amortization.....	<u>-0-</u>	<u>-0-</u>	<u>38</u>
INCREASE (DECREASE) IN WORKING CAPITAL...	<u>\$ (619)</u>	<u>\$ 1,592</u>	<u>\$ (482)</u>
ANALYSIS OF INCREASE (DECREASE) IN WORKING CAPITAL			
Increase (decrease) in current assets:			
Cash in bank.....	\$(1,830)	\$ 534	\$ 837
Interest receivable.....	<u>1,054</u>	<u>(700)</u>	<u>513</u>
	<u>(776)</u>	<u>(166)</u>	<u>1,350</u>
(Increase) decrease in current liabilities:			
Accrued payroll.....	(10)	2	(24)
Accrued payroll tax.....	21	(41)	100
Accrued property tax.....	146	-0-	(111)
Deferred interest income.....	<u>-0-</u>	<u>1,797</u>	<u>(1,797)</u>
	<u>157</u>	<u>1,758</u>	<u>(1,832)</u>
INCREASE (DECREASE) IN WORKING CAPITAL...	<u>\$ (619)</u>	<u>\$ 1,592</u>	<u>\$ (482)</u>

These Unaudited Financial Statements Should Be Read Only In
Connection With The Accountants' Report, Footnotes And
Statements of Accounting Policy.

THE MANCOS CORPORATION

NOTES TO UNAUDITED FINANCIAL STATEMENTS

December 31, 1977, 1976, and 1975

Note 1 Significant Accounting Policies

1A — Land, buildings and equipment are recorded at cost. Depreciation on the equipment and buildings has been temporarily suspended since they are not presently being utilized. It is felt by management this non-usage substantially halts depreciation.

1B — Development and exploration costs are recorded at cost and are not being amortized until such time as production starts and the benefits of these expenditures accrue to the Company. If production is never resumed, development and exploration cost would have minimal value.

1C — Reorganization costs are recorded at cost and are not being amortized. They consist of legal fees related to the pooling of interest reorganization of U.S. No Joint Concrete Pipe Company, First National Oil and Minerals Company, Red Arrow Gold Corporation and The Mancos Corporation on July 10, 1970.

Note 2 Note Receivable — Stockholder

This note is due November 29, 1978, bears interest at 7% per annum and is unsecured.

Note 3 Note Receivable — Silver Bell Industries, Inc.

This 7% uncollateralized note; dated September 6, 1973, and originally due September 6, 1974; extended at various times, more recently providing that the note is payable in its entirety plus interest on May 31, 1979.

Note 4 Capital Stock

There are 5,000,000 shares of \$.01 par value shares of common stock authorized. There were 1,765,219 shares issued and outstanding at December 31, 1977.

Note 5 Income(Loss) Per Share

Income (loss) per share was computed using the weighted average number of shares outstanding during the year.

Note 6 Supplemental Information

Unaudited information relative to cash receipts and disbursements for the period January 1, 1978 to June 30, 1978.

Cash Receipts:	
Interest.....	\$4,254
Leases.....	106
TOTAL CASH RECEIPTS	<u>4,360</u>
Cash Disbursements:	
Wages and payroll taxes.....	2,245
Property taxes.....	809
Accounting.....	195
Colorado corporation reports.....	90
TOTAL CASH DISBURSEMENTS.....	<u>3,339</u>
CASH RECEIPTS OVER CASH DISBURSEMENTS FOR THE PERIOD.....	<u>\$1,021</u>

ANNEX I

**PLAN OF LIQUIDATION, DISTRIBUTION OF SHARES
AND DISSOLUTION OF
SILVER BELL INDUSTRIES, INC.**

The following Plan of Liquidation, Distribution of Shares, and Dissolution of Silver Bell Industries, Inc. (the "Company"), hereinafter called the "Plan", shall be effective only upon the adoption and approval of the Plan at a meeting of shareholders of the Company by the affirmative vote of the holders of record of two-thirds (2/3rds) of the outstanding shares of the Company. The day of such adoption and approval by the shareholders is hereinafter called the "Effective Date."

1. As promptly as practicable after the Effective Date, but in no event later than one year after the Effective Date, the Company shall be dissolved in accordance with the laws of the State of Colorado.

2. After the Effective Date, the Company will cease the active conduct of its business and will wind up its affairs within the 12-month period beginning on the Effective Date, liquidate and distribute all of its assets in complete liquidation, less any assets retained or distributed to meet claims and liabilities.

3. The officers and directors of the Company are authorized from time to time to negotiate and to consummate sales of all or any portion or portions of the properties of the Company on such terms and conditions as they in their discretion shall deem beneficial to the Company, including the assumption by the purchaser or purchasers of any or all liabilities of the Company.

4. All known or ascertainable liabilities of the Company shall be promptly paid or provided for. There may also be set aside and retained, in cash, securities, or other assets, a reserve fund in an amount estimated by the directors of the Company to be necessary for the payment of estimated expenses, taxes, and contingent liabilities (including expenses of liquidation, termination of existence, distribution of assets, and dissolution). If the directors in their discretion deem it advisable to distribute a reserve for the aforesaid purposes to a trustee in lieu of retaining the same, such trustee arrangement shall be deemed to have been approved by all of the shareholders upon the approval of this Plan by the requisite two-thirds (2/3rds) vote.

5. Prior to the expiration of the 12-month period beginning on the Effective Date, all of the assets of the Company which, in the opinion of its directors, need no longer be retained or distributed to a trustee as a reserve fund or to meet claims or liabilities shall be distributed to the holders of the Company's shares.

6. The foregoing distributions to complete the liquidation shall be in exchange solely for, and in complete redemption and cancellation of, and in payment for all of the outstanding shares of the Company. The shareholders shall surrender their certificates as a condition to any distribution.

7. The Board of Directors will fix a record date for the determination of shareholders eligible for any distribution under this Plan.

**PLAN OF LIQUIDATION, DISTRIBUTION OF SHARES
AND DISSOLUTION OF
THE MANCOS CORPORATION**

The following Plan of Liquidation, Distribution of Shares, and Dissolution of The Mancos Corporation (the "Company"), hereinafter called the "Plan", shall be effective only upon the adoption and approval of the Plan at a meeting of shareholders of the Company by the affirmative vote of the holders of record of two-thirds (2/3rds) of the outstanding shares of the Company. The day of such adoption and approval by the shareholders is hereinafter called the "Effective Date".

1. As promptly as practicable after the Effective Date, but in no event later than one year after the Effective Date, the Company shall be dissolved in accordance with the laws of the State of Colorado.

2. After the Effective Date, the Company will cease the active conduct of its business and will wind up its affairs within the 12-month period beginning on the Effective Date, liquidate and distribute all of its assets in complete liquidation, less any assets retained or distributed to meet claims and liabilities.

3. The officers and directors of the Company are authorized from time to time to negotiate and to consummate sales of all or any portion or portions of the properties of the Company on such terms and conditions as they in their discretion shall deem beneficial to the Company, including the assumption by the purchaser or purchasers of any or all liabilities of the Company.

4. All known or ascertainable liabilities of the Company shall be promptly paid or provided for. There may also be set aside and retained, in cash, securities, or other assets, a reserve fund in an amount estimated by the directors of the Company to be necessary for the payment of estimated expenses, taxes, and contingent liabilities (including expenses of liquidation, termination of existence, distribution of assets, and dissolution). If the directors in their discretion deem it advisable to distribute a reserve for the aforesaid purposes to a trustee in lieu of retaining the same, such trustee arrangement shall be deemed to have been approved by all of the shareholders upon the approval of this Plan by the requisite two-thirds (2/3rds) vote.

5. Prior to the expiration of the 12-month period beginning on the Effective Date, all of the assets of the Company which, in the opinion of its directors, need no longer be retained or distributed to a trustee as a reserve fund or to meet claims or liabilities shall be distributed to the holders of the Company's shares.

6. The foregoing distributions to complete the liquidation shall be in exchange solely for, and in complete redemption and cancellation of, and in payment for all of the outstanding shares of the Company. The shareholders shall surrender their certificates as a condition to any distribution.

7. The Board of Directors will fix a record date for the determination of shareholders eligible for any distribution under this Plan.

ANNEX III

AGREEMENT AND PLAN OF REORGANIZATION

This Agreement and Plan of Reorganization is entered into as of the 15th day of May, 1978, among SILVER BELL INDUSTRIES, INC. (Silver Bell), a Colorado corporation; UNION OIL COMPANY OF CALIFORNIA (Union), a California corporation; and MINERALS EXPLORATION COMPANY (Minerals), a California corporation and wholly-owned subsidiary of Union.

WITNESSETH:

WHEREAS, Silver Bell is a development stage corporation engaged primarily in the acquisition of interests in and to mineral properties and conducts exploration thereon directly or through partners, lessees, purchasers, and optionees for many types of minerals; and

WHEREAS, the Boards of Directors of Silver Bell, Union and Minerals, respectively, deem it advisable in their common best interest and in the best interest of their respective shareholders that Minerals acquire substantially all of the assets of Silver Bell pursuant to this Agreement and applicable provisions of law and as a plan of reorganization within the purview of Section 368(a)(1)(C) of the Internal Revenue Code of 1954 as amended and have approved and adopted this Agreement and Plan of Reorganization; and

WHEREAS, contemporaneously with the execution and delivery of this Agreement, the Parties hereto are effecting the reorganization as hereinafter set forth pursuant to which Minerals is acquiring substantially all of the assets of Silver Bell for:

A. 418,095 shares of Union's common stock, being the only Class of stock Union has outstanding; and

B. The assumption by Minerals of certain liabilities and obligations of Silver Bell; and

WHEREAS, it is contemplated that the shares of Union's common stock issued to Silver Bell as consideration for the transfer of substantially all of Silver Bell's Assets to Minerals (except to the extent that sales of such shares may be made to provide cash to pay persons entitled to fractional shares, to pay expenses of Silver Bell and to make payments to any dissenting Silver Bell shareholders) will then be distributed to the shareholders of Silver Bell in complete liquidation of Silver Bell according to their respective interests and that Silver Bell will then be dissolved pursuant to applicable state laws.

AGREEMENT

NOW, THEREFORE, in consideration of the premises and subject to the terms and conditions hereinafter set forth, Silver Bell, Union and Minerals hereby each agree as follows:

ARTICLE I

SALE OF ASSETS BY SILVER BELL

1.01 **The Sale.** Subject to the terms and conditions of this Agreement, Minerals shall purchase and accept delivery from Silver Bell and Silver Bell shall sell and deliver to Minerals the Assets (as hereinafter defined).

1.02 **The Assets.** The Assets are all properties and rights of every name and description, real, personal, mixed, tangible and intangible, wherever situated or owned by Silver Bell at the time of closing hereunder, including but not by way of limitation those certain properties substantially as described in the schedules attached to and by reference made a part of instrument styled Assignment and Con-

veyance of Mineral Properties attached hereto as Exhibit 1, and by this reference made a part hereof for all purposes; provided, however, the term "The Assets" shall not include cash on hand, in banks (including certificates of deposit) and on deposit with third parties as of the date of closing.

ARTICLE II THE CONSIDERATION

2.01 **Consideration.** The consideration for the Assets consists of:

A. Four hundred eighteen thousand ninety-five (418,095) shares of Union's common stock duly registered, as hereinafter provided, to be issued by Union to Silver Bell at the time of closing.

B. The assumption by Minerals of certain specified obligations of Silver Bell.

2.02 **Minerals Not A Successor Corporation.** When and if the transaction contemplated by this Agreement is consummated, Minerals shall have only acquired the Assets of Silver Bell and shall not be considered as a successor corporation to Silver Bell; provided, however, Minerals shall as of the time of closing execute and deliver to Silver Bell an instrument whereby Minerals assumes all of Silver Bell's obligations under all of those certain agreements listed in Schedule of Obligations, attached hereto as Exhibit 2 and by this reference made a part hereof for all purposes. Such instrument of assumption shall provide (subject to such exceptions as are set forth herein and shall be set forth in such instrument) that Minerals shall assume and indemnify Silver Bell against and hold it harmless from any and all obligations in connection with the Assets arising subsequent to the time of closing. Silver Bell shall remain liable for all obligations not listed in Exhibit 2 or otherwise assumed by Minerals including but not limited to obligations to shareholders, including dissenting shareholders.

ARTICLE III THE CLOSING

3.01 **Time and Place.** The Closing with respect to the transactions contemplated by this Agreement shall be held on August 31, 1978, at 10:00 A.M. Pacific Daylight Savings Time, at the offices of Union Oil Company of California, 461 South Boylston Street, Los Angeles, California 90017, or at such earlier or later time or at such other place as may be agreed upon by the Parties, such time being referred to herein as "Time of Closing."

3.02 **Instruments of Conveyance.** At the Time of Closing, Silver Bell shall assign, transfer and deliver to Minerals the Assets by executing and delivering the Assignment and Conveyance of Mineral Properties (Exhibit 1) and all other instruments, documents of title conveyances, bills of sale, assignments and other instruments necessary or desirable to convey, transfer and assign the Assets to Minerals.

3.03 **Issuance of Union's Common Stock.** At the time of closing, Union shall issue the shares of common stock provided for in Section 2.01 to Silver Bell.

ARTICLE IV REPRESENTATIONS AND WARRANTIES OF SILVER BELL

Silver Bell represents, warrants and agrees as follows:

4.01 **Corporate Existence.** Silver Bell is a corporation organized and existing under the laws of the State of Colorado, is authorized to hold interests and rights to mineral properties and is authorized to hold property and conduct business in all of the states in which the Assets are located.

4.02 Corporate Powers. Silver Bell has the legal power and right to enter into this Agreement and the consummation of the transactions contemplated hereby will not result in the breach of any term or condition or constitute a default under any agreement or other instrument relating to or affecting the Assets to which Silver Bell is a party or by which it is bound subject only to the obtaining of the consents, waivers and releases listed in the Schedule of Consents attached hereto as Exhibit 3 and by this reference made a part hereof for all purposes.

4.03 Assets Free of Encumbrances. The Assets are free and clear of liens, charges and encumbrances except:

A. Minor imperfections in title which do not materially affect the operation or materially detract from the value of the Assets;

B. Encumbrances arising from the terms and provisions of the various agreements relating to the properties, which agreements are described in the schedules attached to the Assignment and Conveyance of Mineral Properties (Exhibit 1).

4.04 No Subsidiaries. Silver Bell has no subsidiaries.

4.05 No Defaults. Silver Bell has not received any notice of default and does not have knowledge of any circumstances of any person intending to declare a default of any material nature under any agreements or other instruments relating to or affecting the Assets.

4.06 No Finders' Fees. Silver Bell has not incurred any obligation (contingent or otherwise) for brokers' fees or finders' fees in connection with the transactions contemplated by this Agreement.

4.07 No Litigation. There are no pending actions, suits or other proceedings affecting all or any part of the Assets.

4.08 No Rights to Others. Silver Bell has not granted to any person other than Union and Minerals any rights (legal or equitable, direct or indirect, vested or contingent) with respect to the Assets which shall be operative at the Time of Closing and which has not been disclosed in the schedules attached to the Assignment and Conveyance of Mineral Properties (Exhibit 1).

4.09 Correctness of Exhibits. Each of the Exhibits referred to herein delivered by Silver Bell to Union pursuant to this Agreement is substantially complete and the information reported therein is correct as of the date of this Agreement.

4.10 Compliance with Securities Laws. When the Registration Statement referred to in Article VI or any post-effective amendments thereto shall become effective, and when the Proxy Statement referred to in Article VI or any amendment thereto shall be mailed to holders of securities of Silver Bell, and at all times subsequent to such effectiveness or mailing up to and including the Time of Closing, such Registration Statement and such Proxy Statement and all amendments or supplements thereto, with respect to all information set forth therein relating to Silver Bell and in respect of this Agreement and Plan of Reorganization will comply in all material respects with the provisions of the Securities Act of 1933 as amended (the "Securities Act"), and the Securities Exchange Act of 1934 as amended (the "Exchange Act"), and the rules and regulations of the Securities and Exchange Commission (the "SEC") thereunder and will not contain any untrue statements of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements contained therein not misleading.

4.11 Silver Bell's 10-K. The information included in Silver Bell's Annual Report on Form 10-K for its fiscal year ended March 31, 1977, (Silver Bell's 10-K) is true and correct in all material respects and does not contain any material untrue statements of material fact or omit to state any material fact necessary to make the statements made therein not misleading.

ARTICLE V

REPRESENTATIONS AND WARRANTIES BY UNION

Union represents, warrants and agrees as follows:

5.01 Organization, etc. Union and each subsidiary named in Union's Annual Report on Form 10-K for the fiscal year ended December 31, 1977 (the "Union 10-K") (except for Collier Carbon and Chemical Corporation which has been merged into Union) is a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation, and Minerals is a corporation duly organized, validly existing and in good standing under the laws of the State of California.

5.02 Capital Stock of Union. As of March 31, 1978, the authorized capital stock of Union consisted of 65,000,000 shares of common stock, par value \$8½ per share, of which approximately 42,299,000 shares were issued and outstanding. As of the date of this Agreement, there are no outstanding options, warrants or other rights to subscribe for or purchase from Union or any of its subsidiaries any capital stock of Union or securities convertible into or exchangeable for capital stock of Union except upon conversion of the options and other securities listed in Exhibit 4 attached hereto and by this reference made a part hereof for all purposes and except that as of March 31, 1978, less than 650,000 shares of Union's capital stock were reserved for issuance in connection with the plans listed in Exhibit 4. Such issued shares of Union are and any shares reserved for issuance pursuant to such plans or upon such exercise or conversion prior to the Time of Closing of this Agreement will be duly authorized, validly issued and outstanding, and fully paid and nonassessable.

5.03 Union's SEC Reports.

A. Union has previously furnished Silver Bell a true and complete copy of (i) the Union 10-K, and (ii) Union's Quarterly Report on Form 10-Q for the quarter ended March 31, 1978 (the "Union 10-Q"). The financial statements contained in the Union 10-K and the consolidated balance sheet and the statement of consolidated earnings contained in the Union 10-Q have been prepared in conformity with generally accepted accounting principles, except for information omitted in accordance with the instructions to Form 10-Q, and fairly present the financial position of Union and the results of operations of Union on a basis consistent with prior periods. The consolidated balance sheets of Union and its subsidiaries as at December 31, 1977 and 1976, contained in the Union 10-K fairly present the consolidated financial condition of Union and its subsidiaries as at the dates thereof; the related statements of consolidated earnings of Union and its subsidiaries contained therein fairly present the results of the operations thereof for the fiscal years then ended; and the consolidated summary of operations of Union and its subsidiaries contained therein fairly summarizes the operations thereof for the five fiscal years ended December 31, 1977. The consolidated balance sheets of Union and its subsidiaries as at March 31, 1978 and 1977 contained in the Union 10-Q fairly present the financial position of Union and its subsidiaries at March 31, 1978 and 1977 and the related statements of consolidated earnings of Union and its subsidiaries for the three month periods ending March 31, 1978 and 1977 contained therein fairly present the results of the operations thereof for the periods indicated, subject in each case to normal year end audit adjustments. For the purposes of this Agreement, all financial statements referred to in this Section 5.03 shall be deemed to include any notes to such financial statements.

B. Neither Union nor any of its subsidiaries or affiliates has any liabilities or obligations, either accrued, contingent or otherwise, which, individually or in the aggregate, are material to Union and its consolidated subsidiaries considered as a whole, and which have not been:

(i) reflected in the consolidated balance sheet of Union and its subsidiaries as at December 31, 1977; or

(ii) specifically described in any schedule furnished to Silver Bell in connection herewith; or

(iii) incurred in the ordinary course of business.

Union's obligations with respect to pension liabilities are disclosed in the Union 10-K.

C. Except as set forth in Exhibit 5 attached hereto and by this reference made a part hereof for all purposes, or as described in the Union 10-K or the Union 10-Q, there are no claims against or liabilities or obligations of, or any reasonable legal basis known to Union for any claims against or liabilities or obligations of Union or any of its subsidiaries which, individually or in the aggregate, might result in or cause any material adverse change in the consolidated financial condition or results of operations of Union and its subsidiaries.

D. Except as set forth in Exhibit 6 attached hereto and by this reference made a part hereof for all purposes or in the Union 10-K or the Union 10-Q, there has not been, occurred or arisen since December 31, 1977, whether or not in the ordinary course of business:

(i) any material adverse change in the financial condition or results of operations of Union and its subsidiaries considered as a whole, from that shown on the consolidated financial statements for the year ended December 31, 1977; or

(ii) any damage or destruction in the nature of a casualty loss, whether covered by insurance or not, materially and adversely affecting any property or business of Union or any of its subsidiaries which in material to the consolidated financial condition or results of operations of Union and its subsidiaries; or

(iii) any actual or, to the knowledge of Union, any threatened strike or other labor trouble or dispute which materially and adversely affects, or which insofar as Union knows might materially and adversely affect, the business or prospects of Union and its subsidiaries considered as a whole; or

(iv) any other event, condition or state of facts of any character (but not including general or political conditions affecting the petroleum industry or industrial companies in the United States) which materially and adversely affects, or threatens to materially and adversely affect, the results of operations or business or financial condition or prospects of Union and its subsidiaries considered as a whole.

Union and its subsidiaries have not engaged in any transaction material to Union and such subsidiaries, taken as a whole, not in the ordinary course of its business since December 31, 1977, except as set forth in such Exhibit 6.

5.04 Status of Union Common Stock. The shares of Union common stock to be issued to Silver Bell pursuant to this Agreement, when so issued, will be duly and validly authorized and issued, fully paid and nonassessable. The number of shares of Union common stock to be issued to Silver Bell in accordance with numbered Section 2.01 shall be adjusted in the event that subsequent to the date of this Agreement but prior to the Time of Closing the outstanding shares of Union common stock shall have been changed into or exchanged for a different number or kind of share or securities through reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other like changes in Union capitalization, then an appropriate and proportionate adjustment shall be made in the number and kind of shares or securities to be delivered to Silver Bell pursuant to this Agreement, it being understood that in no event shall other than Union common stock as then constituted be issued pursuant to this Agreement.

5.05 No Breach of Statute or Contract; Governmental Authorizations; Required Consents. Neither the execution and delivery of this Agreement by Union and Minerals, nor compliance with the terms and provisions of this Agreement by Union and Minerals will conflict with or result in a breach of any of the terms, conditions or provisions of the Certificate of Incorporation or By-laws of Union or any of its subsidiaries or any judgment, order, injunction, decree, regulation or ruling of any court or govern-

mental authority, domestic or foreign, to which Union or any of its subsidiaries is subject or of any agreement, contract or commitment to which Union or any subsidiary is a party and which is material to the financial condition or the results of operations of Union and its subsidiaries considered as a whole, or constitute a material default thereunder, or give to any others any interest or rights, including rights of termination, cancellation or acceleration, in or with respect to any of such agreements, contracts or commitments, or otherwise require the consent or approval of any person.

5.06 No Litigation or Adverse Events. There is no suit, action, legal or administrative, arbitration or other proceeding or governmental investigation, pending or as to which Union or any of its subsidiaries has received in writing any claim or assertion, which might individually or in the aggregate, materially and adversely affect the financial condition or results of operations of Union and its subsidiaries considered as a whole, except as set forth in the Union 10-K or in Exhibit 7 attached hereto and by this reference made a part hereof for all purposes.

5.07 Authorization of Agreement. The execution and delivery and, subject to requisite approval by Union, the performance of this Agreement have been duly and validly authorized and approved by the Boards of Directors of Union and Minerals and Union and Minerals have taken, or will use their best efforts to take prior to the Time of Closing, all action required by law, their respective Certificates of Incorporation and By-laws and all other action required to authorize the execution, delivery and performance of this Agreement.

5.08 Registration Statement and Proxy Statement. When the Registration Statement referred to in Article VI or any post-effective amendment thereto shall become effective, and when the Proxy Statement included therein is mailed to Silver Bell shareholders for the purpose of securing shareholder approval for this Agreement or any amendment or supplement thereto, and at all times subsequent to such effectiveness or mailing up to and including the Time of Closing, such Registration Statement and such Proxy Statement and all amendments or supplements thereto, with respect to all information set forth therein relating to Union and Minerals and in respect to all information set forth therein relating to this Agreement, (i) will comply in all material respects with the provisions of the Securities Act and Exchange Act, respectively, and the rules and regulations of the SEC thereunder and (ii) will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements contained therein not misleading.

5.09 Brokers' or Finders' Fees. Union has incurred no obligation (contingent or otherwise) for brokers' fees or finders' fees in connection with the transactions contemplated by this Agreement.

5.10 Report on Form 10-K. The information included in the Union 10-K previously delivered by Union to Silver Bell is true and correct in all material respects.

5.11 Correctness of Exhibits. Each of the Exhibits referred to herein delivered by Union to Silver Bell, pursuant to this Agreement, is substantially complete and the information reported therein is correct as of the date of this Agreement.

ARTICLE VI

TRANSACTIONS PRIOR TO CLOSING

6.01 Investigations of Business of Silver Bell and Union. Between the date of this Agreement and the Time of Closing, Union, Silver Bell and Minerals each agree to give the other full access to its premises, books and records for the purpose of investigating its business and the conduct thereof.

6.02 Registration Statement and Proxy Statement. Prior to the Time of Closing, Union shall prepare and file with the SEC a Registration Statement on Form S-14 under the Securities Act for the purpose of registering the shares of Union common stock to be exchanged for the Assets and shall duly comply with all applicable state securities or "Blue Sky Laws." As soon as practicable after the Registration Statement becomes effective, Silver Bell shall mail the Proxy Statement included in said Registration Statement to its shareholders and shall submit this Agreement to its shareholders for approval as provided by law and its Articles of Incorporation at a meeting which shall be held as soon as practicable after the effective date of the Registration Statement.

6.03 Listing of Union Common Stock. Union has obtained, or shall use reasonable efforts to obtain prior to the Time of Closing approval for the listing on the New York, Midwest and Pacific Stock Exchanges upon official notice of issuance of the shares of Union common stock to be exchanged for the Assets.

6.04 Information for Registration Statement and Proxy Statement. Silver Bell and Union shall each furnish to the other such data and information as the other may reasonably request for the purpose of including such data and information in the Proxy Statement or Registration Statement.

ARTICLE VII

CONDITIONS PRECEDENT TO THE CONSUMMATION OF THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT

7.01 Conditions Applicable to All Parties. The obligations of Union, Silver Bell and Minerals are conditioned upon:

At the Time of Closing no suit, action, or proceeding being pending or threatened before any court or other governmental agency of the Federal or any state government in which it is sought to restrain or prohibit the consummation of the transactions contemplated hereby; no such other suit, action or proceeding being pending or threatened or no liability or claim have been asserted which would be considered by any Party to be materially significant.

B. The holders of at least two-thirds ($\frac{2}{3}$) of the outstanding stock of Silver Bell shall have approved this Agreement in accordance with the laws of the State of Colorado, Silver Bell's Articles of Incorporation, and By-Laws.

C. The Registration Statement shall be effective under the Securities Act and not subject to any "stop order" or threatened stop order.

D. All legal proceedings in connection with the transactions contemplated by this Agreement being satisfactory to each Party's counsel and each Party's counsel having been furnished with such certificates or other evidence of compliance with the conditions as such counsel may reasonably request and Silver Bell having secured releases, waivers and consents from all of the Parties listed in the Schedule of Consents (Exhibit 3).

7.02 Additional Conditions to Silver Bell's Obligation. The obligations of Silver Bell shall be conditioned upon the satisfactory performance or waiver of the following conditions:

A. The performance by Union and Minerals of all of their obligations and covenants hereunder.

B. The substantial accuracy at the Time of Closing of all of the representations made by Union herein.

C. Silver Bell shall have received from George C. Bond, Esq., General Counsel of Union, or Sam A. Snyder, Esq., Assistant General Counsel of Union, an opinion dated immediately prior to the Time of Closing in form and substance satisfactory to Silver Bell to the effect that:

(i) Union and each of its subsidiaries, including Minerals, is a corporation duly organized and existing and in good standing under the laws of the jurisdiction of its incorporation;

(ii) Union and each of its subsidiaries, including Minerals, has the corporate power to carry on its business as now being conducted;

(iii) The authorized capital stock of Union consists of 65,000,000 shares of common stock par value Eight and One-Third Dollars (\$8 $\frac{1}{3}$) per share, and stating the number of shares of authorized capital stock of Union which have been issued, that such issued shares have been authorized and are validly issued and outstanding, and are all fully paid and nonassessable, and stating the number of shares which at that date were held for any specific purpose;

(iv) The shares of Union common stock to be issued pursuant to this Agreement at the Time of Closing have been duly authorized and, upon issuance, will be duly and validly issued and will be fully paid and nonassessable;

(v) This Agreement has been duly executed and delivered by Union and Minerals and is a valid and binding obligation upon Union and Minerals and all corporate action by Union and Minerals required under this Agreement has been taken;

(vi) Neither the execution and delivery by Union and Minerals of this Agreement, nor compliance with the terms and provisions hereof will, to the best of the knowledge of such counsel, conflict with or result in a breach of any term, condition or provision of any judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign, to which Union or Minerals is subject or any material agreement, contract or commitment to which Union or Minerals is a party or by which either it is bound or constitutes a material default thereunder;

(vii) That all consents and approvals required by law, state or federal, and other actions required by law, rule or regulation have been duly taken or obtained in order to permit the consummation of the transactions contemplated by this Agreement.

It is understood that such counsel, in rendering such opinion, is entitled to rely upon the opinions of other counsel for matters relating to local law, including but not by way of limitation, state securities or Blue Sky laws.

D. That owners of not more than an aggregate of five percent (5%) of Silver Bell's outstanding stock have exercised dissenters' rights to receive the fair market value for their stock in accordance with Colorado law.

7.03 Additional Conditions to the Obligations of Union and Minerals. The obligations of Union and Minerals being conditioned upon the satisfactory performance or waiver of the following conditions:

A. The performance by Silver Bell of all of its obligations and covenants hereunder.

B. At the Time of Closing, the Assets shall be in the same conditions as they were on April 1, 1978, except for ordinary use and changes occurring in the ordinary course of business between that date and the Time of Closing.

C. Silver Bell having delivered to Union and Minerals such evidence of title to the Assets, including opinions of counsel as it may have in its files and such other title information as Union may reasonably request.

D. Union's counsel having examined title to the Assets in such detail as such counsel deems reasonably appropriate for the examination of mining title and such counsel being reasonably satisfied that subject to minor imperfections as are usual in the case of mining properties that Silver Bell has title to the Assets together with the right to transfer and assign the Assets to Union and that Silver Bell has not created any liens, charges, encumbrances or other burdens on the Assets except those described in the schedule attached to the Assignment and Conveyance of Mineral Property.

E. Union having determined to its satisfaction that all of the representations made herein are substantially accurate in all material respects.

ARTICLE VIII FRUSTRATION OF AGREEMENT

8.01 **Termination Prior to Closing.** In the event the transactions contemplated by this Agreement are not consummated on or before August 31, 1978 (unless such date is extended by mutual agreement of the parties), because of the non-occurrence of the conditions precedent specified in Article VII or the waiver of the condition of the Party having the right to waive such condition, then this Agreement shall terminate and, except as provided in this Article VIII, no Party shall have any further right or obligation hereunder.

8.02 **Information to be Confidential.** In the event of frustration and termination of this Agreement, all information obtained from another Party pursuant to the terms hereof shall be returned to the Party furnishing such information and all Parties agree not to disclose to any third party any confidential information obtained hereunder.

8.03 **Costs in Event of Frustration.** Each Party shall be responsible for and shall pay any and all costs incurred by it in connection with the transactions contemplated by this Agreement and shall indemnify each other Party against any and all claims with respect thereto.

ARTICLE IX SURVIVAL OF REPRESENTATIONS AND WARRANTIES AND FURTHER ASSURANCES

9.01 **Survival of Representations and Warranties.** The representations and warranties made by the Parties herein and in the Assignment and Conveyance of Mineral Properties and the Assumption of Obligation shall survive the Time of Closing.

9.02 **Further Assurances.** At and after the Time of Closing at any time and from time to time as long as it is authorized by law to do so, upon the request of Minerals, and at the expense of Minerals, Silver Bell shall execute and deliver to Minerals such further instruments of conveyance, assignment and transfer and take such further action as Minerals may request to effectively convey, assign, transfer and deliver the Assets pursuant to this Agreement.

ARTICLE X MISCELLANEOUS

10.01 **Silver Bell Affiliates.** "Silver Bell Affiliates" means each person (other than Silver Bell) who, should such person resell Union common stock acquired by him as a distribution in liquidation from Silver Bell, may be deemed to be subject to the requirements of Paragraphs (c) and (d) of

Rule 145 under the Securities Act. Silver Bell, in connection with its distribution of Union common stock to its shareholders, shall require such Silver Bell Affiliates to sign and deliver to Union a letter corresponding to the text set forth in Exhibit 8, attach hereto and by this reference made a part hereof for all purposes. Union, on direction from Silver Bell, shall then imprint appropriate legends on the stock certificates representing the shares to be distributed to such affiliates, imposing restrictions on the rights of resale of such shares to the extent such restrictions continue to exist at the time the shares are distributed by Silver to Silver Bell Affiliates.

10.02 Allocation of Costs. The costs incurred in preparing for and consummating the transaction contemplated hereby shall be allocated as follows:

A. To Silver Bell:

- (i) The cost of obtaining consents and waivers.
- (ii) The cost of curing title to the Assets, if any.
- (iii) All of its own counsel and accounting fees and the cost of securing shareholder approval.

B. To Union:

- (i) The cost of preparing the Registration Statement.
- (ii) All counsel and accounting fees incurred by Union, including those relating to title examination.
- (iii) The cost of recording the documents transferring the Assets.
- (iv) All stock exchange application and listing fees associated with the common stock to be issued to Silver Bell hereunder.

C. To Be Shared Equally by Union and Silver Bell: All costs incurred in the preparation and printing of this Agreement and other documents required to be printed in order to consummate the contemplated transactions.

10.03 Applicable Law. This Agreement and the legal relations between the Parties shall be governed by and construed in accordance with the law and jurisprudence of the State of California, excluding that body of law referred to as conflicts of law.

10.04 Notices. Any notices or communications required or permitted hereunder shall be sufficiently given if delivered or mailed by certified mail, postage prepaid, as follows:

To Union:

Union Oil Company of California
P.O. Box 7600
Los Angeles, California 90051
Attention: Claude S. Brinegar
Vice President

To Minerals:

Minerals Exploration Company
P.O. Box 54945
Los Angeles, California 90054
Attention: E. H. Eakland, Jr.
President

To Silver Bell:

Silver Bell Industries, Inc.
158 Fillmore Street
Denver, Colorado 80206

Attention: Eugene H. Sanders
President

With Copies to: Alec J. Keller, Esq.
Keller, McSwain, Wing & Maxfield
2570 First of Denver Plaza
633 Seventeenth Street
Denver, Colorado 80202

Or at such addresses as hereinafter may be furnished in writing by each Party hereto to the other Party.

10.05 Schedule of Exhibits. The following exhibits are attached and by reference made a part of this Agreement:

Exhibit 1 — Assignment and Conveyance of Mineral Properties

Exhibit 2 — Schedule of Obligations

Exhibit 3 — Schedule of Consents

Exhibit 4 — List of Union's Stock Plans

Exhibit 5 — List of Claims against Union

Exhibit 6 — Schedule of Material Changes

Exhibit 7 — Schedule of Material Litigation

Exhibit 8 — Rule 145 Agreement

Such exhibits may be amended and corrected by the mutual agreement of the Parties.

10.06 Headings. The descriptive headings of the several Articles, Sections and Paragraphs of this Agreement are inserted for convenience only and do not constitute a part of this Agreement.

10.07 Amendments. Any and all amendments to this Agreement must be in writing and executed by all of the parties hereto.

10.08 Counterparts. This Agreement may be executed in several counterparts, each of which shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the Parties have caused this instrument to be executed on the day and year above written.

UNION OIL COMPANY OF CALIFORNIA

Attest:

By CLAUDE S. BRINEGAR

R. P. VAN ZANDT

Assistant Secretary

SILVER BELL INDUSTRIES, INC.

Attest:

By EUGENE H. SANDERS

President

WILLIAM R. SOMERVILLE

MINERALS EXPLORATION COMPANY

Attest:

By EDWARD H. EAKLAND, JR.

R. P. VAN ZANDT

Union Oil Company of California
Union Oil Center, Los Angeles, California 90017



Claude S. Brinegar
Senior Vice President

October 10, 1978

Silver Bell Industries, Inc.
158 Fillmore Street
Denver, Colorado 80206

RE: Amendment to Agreement and
Plan of Reorganization
dated May 15, 1978

Gentlemen:

This letter, when accepted by Silver Bell Industries, Inc. ("Silver Bell"), shall constitute an amendment to the Agreement and Plan of Reorganization dated May 15, 1978 between Union Oil Company of California, Minerals Exploration Company and Silver Bell, whereby the date of August 31, 1978, appearing in Article III, Section 3.01 and in Article VIII, Section 8.01 of said Agreement is deleted and the date of December 15, 1978 is hereby substituted.

If the foregoing meets with your approval, please sign the duplicate of this letter and return it to the undersigned.

Very truly yours,

UNION OIL COMPANY OF CALIFORNIA

CLAUDE S. BRINEGAR
Claude S. Brinegar
Senior Vice President

Agreed to this th day of October, 1978

SILVER BELL INDUSTRIES, INC.

By EUGENE H. SANDERS
Eugene H. Sanders
President

MINERALS EXPLORATION COMPANY

CLAUDE S. BRINEGAR
Claude S. Brinegar
Vice President

ANNEX IV

AGREEMENT AND PLAN OF REORGANIZATION

This Agreement and Plan of Reorganization is entered into as of the 21st day of June, 1978, among THE MANCOS CORPORATION (Mancos), a Colorado corporation; UNION OIL COMPANY OF CALIFORNIA (Union), a California corporation; and MINERALS EXPLORATION COMPANY (Minerals), a California corporation and wholly-owned subsidiary of Union.

WITNESSETH:

WHEREAS, Mancos owns interests in and to mineral properties in Montezuma County, Colorado; and

WHEREAS, the Boards of Directors of Mancos, Union and Minerals, respectively, deem it advisable in their common best interest and in the best interest of their respective shareholders that Minerals acquire substantially all of the assets of Mancos pursuant to this Agreement and applicable provisions of law and as a plan of reorganization within the purview of Section 368(a)(1)(C) of the Internal Revenue Code of 1954 as amended and have approved and adopted this Agreement and Plan of Reorganization; and

WHEREAS, contemporaneously with the execution and delivery of this Agreement, the Parties hereto are effecting the reorganization as hereinafter set forth pursuant to which Minerals is acquiring substantially all of the assets of Mancos for 6,905 shares of Union's common stock, being the only class of stock Union has outstanding; and

WHEREAS, it is contemplated that the shares of Union's common stock issued to Mancos as consideration for the transfer of substantially all of Mancos's Assets to Minerals (except to the extent that sales of such shares may be made to provide cash to pay persons entitled to fractional shares, to pay expenses of Mancos and to make payments to any dissenting Mancos shareholders) will then be distributed to the shareholders of Mancos according to their respective interests and that Mancos will then be dissolved pursuant to applicable state laws.

AGREEMENT

NOW, THEREFORE, in consideration of the premises and subject to the terms and conditions hereinafter set forth, Mancos, Union and Minerals hereby each agree as follows:

ARTICLE I

SALE OF ASSETS BY MANCOS

1.01 **The Sale.** Subject to the terms and conditions of this Agreement, Minerals shall purchase and accept delivery from Mancos and Mancos shall sell and deliver to Minerals the Assets (as hereinafter defined).

1.02 **The Assets.** The Assets are all properties and rights of every name and description, real, personal, mixed, tangible and intangible, wherever situated or owned by Mancos at the time of closing hereunder, including but not by way of limitation those certain properties substantially as described in the schedules attached to and by reference made a part of instrument styled Assignment and Conveyance of Mineral Properties attached hereto as Exhibit 1, and by this reference made a part hereof for all purposes; provided, however, the term "The Assets" shall not include cash on hand, in banks (including certificates of deposit) and on deposit with third parties as of the date of closing.

ARTICLE II

THE CONSIDERATION

2.01 **Consideration.** The consideration for the Assets consists of Six Thousand Nine Hundred Five shares of Union's common stock duly registered, as hereinafter provided, to be issued by Union to Mancos at the time of closing.

2.02 **Minerals Not A Successor Corporation.** When and if the transaction contemplated by this Agreement is consummated, Minerals shall have only acquired the Assets of Mancos and shall not be considered as a successor corporation to Mancos. Mancos shall remain liable for all obligations not listed in Exhibit 2 or otherwise specifically assumed by Minerals including but not limited to obligations to shareholders, including dissenting shareholders.

ARTICLE III

THE CLOSING

3.01 **Time and Place.** The Closing with respect to the transactions contemplated by this Agreement shall be held on August 31, 1978, at 10:00 A.M. Pacific Daylight Savings Time, at the offices of Union Oil Company of California, 461 South Boylston Street, Los Angeles, California 90017, or at such earlier or later time or at such other place as may be agreed upon by the Parties, such time being referred to herein as "Time of Closing."

3.02 **Instruments of Conveyance.** At the Time of Closing, Mancos shall assign, transfer and deliver to Minerals the Assets by executing and delivering the Assignment and Conveyance of Mineral Properties (Exhibit 1) and all other instruments, documents of title conveyances, bills of sale, assignments and other instruments necessary or desirable to convey, transfer and assign the Assets to Minerals.

3.03 **Issuance of Union's Common Stock.** At the time of closing, Union shall issue the shares of common stock provided for in Section 2.01 to Mancos.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF MANCOS

Mancos represents, warrants and agrees as follows:

4.01 **Corporate Existence.** Mancos is a corporation organized and existing under the laws of the State of Colorado, is authorized to hold interests and rights to mineral properties and is authorized to hold property and conduct business in all of the states in which the Assets are located.

4.02 **Corporate Powers.** Mancos has the legal power and right to enter into this Agreement and the consummation of the transactions contemplated hereby will not result in the breach of any term or condition or constitute a default under any agreement or other instrument relating to or affecting the Assets to which Mancos is a party or by which it is bound subject only to the obtaining of the consents, waivers and releases listed in the Schedule of Consents attached hereto as Exhibit 3 and by this reference made a part hereof for all purposes.

4.03 **Assets Free of Encumbrances.** The Assets are free and clear of liens, charges and encumbrances except:

A. Minor imperfections in title which do not materially affect the operation or materially detract from the value of the Assets;

B. Encumbrances arising from the terms and provisions of the various agreements relating to the properties, which agreements are described in the schedules attached to the Assignment and Conveyance of Mineral Properties (Exhibit 1).

4.04 No Subsidiaries. Mancos has no subsidiaries.

4.05 No Defaults. Mancos has not received any notice of default and does not have knowledge of any circumstances of any person intending to declare a default of any material nature under any agreements or other instruments relating to or affecting the Assets.

4.06 No Finders' Fees. Mancos has not incurred any obligation (contingent or otherwise) for brokers' fees or finders' fees in connection with the transactions contemplated by this Agreement.

4.07 No Litigation. There are no pending actions, suits or other proceedings affecting all or any part of the Assets.

4.08 No Rights to Others. Except for an Agreement and Plan of Reorganization with Silver Bell Industries, Inc., which is superseded by this Agreement and which will not become operative unless this Agreement is not consummated, Mancos has not granted to any person other than Union and Minerals any right (legal or equitable, direct or indirect, vested or contingent) with respect to the Assets which shall be operative at the Time of Closing and which has not been disclosed in the schedules attached to the Assignment and Conveyance of Mineral Properties (Exhibit 1).

4.09 Correctness of Exhibits. Each of the Exhibits referred to herein delivered by Mancos to Union pursuant to this Agreement is substantially complete and the information reported therein is correct as of the date of this Agreement.

4.10 Compliance with Securities Laws. When the Registration Statement referred to in Article VI or any post-effective amendments thereto shall become effective, and when the Proxy Statement referred to in Article VI or any amendment thereto shall be mailed to holders of securities of Mancos, and at all times subsequent to such effectiveness or mailing up to and including the Time of Closing, such Registration Statement and such Proxy Statement and all amendments or supplements thereto, with respect to all information set forth therein relating to Mancos and in respect of this Agreement and Plan of Reorganization will comply in all material respects with the provisions of the Securities Act of 1933 as amended (the "Securities Act"), and the Securities Exchange Act of 1934 as amended (the "Exchange Act"), and the rules and regulations of the Securities and Exchange Commission (the "SEC") thereunder and will not contain any untrue statements of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements contained therein not misleading.

4.11 Mancos's Financial Statements. The information included in Mancos's Financial Statements for its fiscal year ended December 31, 1977, is true and correct in all material respects and does not contain any material untrue statements of material fact or omit to state any material fact necessary to make the statements made therein not misleading.

ARTICLE V

REPRESENTATIONS AND WARRANTIES BY UNION

Union represents, warrants and agrees as follows:

5.01 Organization, etc. Union and each subsidiary named in Union's Annual Report on Form 10-K for the fiscal year ended December 31, 1977 (the "Union 10-K") (except for Collier Carbon and Chemical Corporation which has been merged into Union) is a corporation duly organized, validly existing and in good standing under the laws of its jurisdiction of incorporation, and Minerals is a

corporation duly organized, validly existing and in good standing under the laws of the States of California.

5.02 Capital Stock of Union. As of March 31, 1978, the authorized capital stock of Union consisted of 65,000,000 shares of common stock par value \$8 $\frac{1}{3}$ per share, of which approximately 42,299,000 shares were issued and outstanding. Except for the proposed transaction with Silver Bell Industries, Inc., as of the date of this Agreement, there are no outstanding options, warrants or other rights to subscribe for or purchase from Union or any of its subsidiaries any capital stock of Union or securities convertible into or exchangeable for capital stock of Union except upon conversion of the options and other securities listed in Exhibit 4 attached hereto and by this reference made a part hereof for all purposes and except that as of March 31, 1978, less than 650,000 shares of Union's capital stock were reserved for issuance in connection with the plans listed in Exhibit 4. Such issued shares of Union are and any shares reserved for issuance pursuant to such plans or upon such exercise or conversion prior to the Time of Closing of this Agreement will be duly authorized, validly issued and outstanding, and fully paid and nonassessable.

5.03 Union's SEC Reports.

A. Union has previously furnished Mancos a true and complete copy of (i) the Union 10-K, and (ii) Union's Quarterly Report on Form 10-Q for the quarter ended March 31, 1978 (the "Union 10-Q"). The financial statements contained in the Union 10-K and the consolidated balance sheet and the statement of consolidated earnings contained in the Union 10-Q have been prepared in conformity with generally accepted accounting principles, except for information omitted in accordance with the instructions to Form 10-Q, and fairly present the financial position of Union and the results of operations of Union on a basis consistent with prior periods. The consolidated balance sheets of Union and its subsidiaries as at December 31, 1977 and 1976, contained in the Union 10-K fairly present the consolidated financial condition of Union and its subsidiaries as at the dates thereof; the related statements of consolidated earnings of Union and its subsidiaries contained therein fairly present the results of the operations thereof for the fiscal years then ended; and the consolidated summary of operations of Union and its subsidiaries contained therein fairly summarizes the operations thereof for the five fiscal years ended December 31, 1977. The consolidated balance sheets of Union and its subsidiaries as at March 31, 1978 and 1977 contained in the Union 10-Q fairly present the financial position of Union and its subsidiaries at March 31, 1978 and 1977 and the related statements of consolidated earnings of Union and its subsidiaries for the three month periods ending March 31, 1978 and 1977 contained therein fairly present the results of the operations thereof for the periods indicated, subject in each case to normal year end audit adjustments. For the purposes of this Agreement, all financial statements referred to in this Section 5.03 shall be deemed to include any notes to such financial statements.

B. Neither Union nor any of its subsidiaries or affiliates has any liabilities or obligations, either accrued, contingent or otherwise, which, individually or in the aggregate, are material to Union and its consolidated subsidiaries considered as a whole, and which have not been:

- (i) reflected in the consolidated balance sheet of Union and its subsidiaries as at December 31, 1977; or
- (ii) specifically described in any schedule furnished to Mancos in connection herewith; or
- (iii) incurred in the ordinary course of business.

Union's obligations with respect to pension liabilities are disclosed in the Union 10-K.

C. Except as set forth in Exhibit 5 attached hereto and by this reference made a part hereof for all purposes, or as described in the Union 10-K or the Union 10-Q, there are no claims against or liabilities or obligations of, or any reasonable legal basis known to Union for any claims

against or liabilities or obligations of Union or any of its subsidiaries which, individually or in the aggregate, might result in or cause any material adverse change in the consolidated financial condition or results of operations of Union and its subsidiaries.

D. Except as set forth in Exhibit 6 attached hereto and by this reference made a part hereof for all purposes or in the Union 10-K or the Union 10-Q, there has not been, occurred or arisen since December 31, 1977, whether or not in the ordinary course of business:

(i) any material adverse change in the financial condition or results of operations of Union and its subsidiaries considered as a whole, from that shown on the consolidated financial statements for the year ended December 31, 1977; or

(ii) any damage or destruction in the nature of a casualty loss, whether covered by insurance or not, materially and adversely affecting any property or business of Union or any of its subsidiaries which is material to the consolidated financial condition or results of operations of Union and its subsidiaries; or

(iii) any actual or, to the knowledge of Union, any threatened strike or other labor trouble or dispute which materially and adversely affects, or which insofar as Union knows might materially and adversely affect, the business or prospects of Union and its subsidiaries considered as a whole; or

(iv) any other event, condition or state of facts of any character (but not including general or political conditions affecting the petroleum industry or industrial companies in the United States) which materially and adversely affects, or threatens to materially and adversely affect, the results of operations or business or financial condition or prospects of Union and its subsidiaries considered as a whole.

Union and its subsidiaries have not engaged in any transaction material to Union and such subsidiaries, taken as a whole, not in the ordinary course of its business since December 31, 1977, except as set forth in such Exhibit 6.

5.04 Status of Union Common Stock. The shares of Union common stock to be issued to Mancos pursuant to this Agreement, when so issued, will be duly and validly authorized and issued, fully paid and nonassessable. The number of shares of Union common stock to be issued to Mancos in accordance with Section 2.01 shall be adjusted in the event that subsequent to the date of this Agreement but prior to the Time of Closing the outstanding shares of Union common stock shall have been changed into or exchanged for a different number or kind of share or securities through reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other like changes in Union capitalization, then an appropriate and proportionate adjustment shall be made in the number and kind of shares or securities to be delivered to Mancos pursuant to this Agreement, it being understood that in no event shall other than Union common stock as then constituted be issued pursuant to this Agreement.

5.05 No Breach of Statute or Contract; Governmental Authorizations; Required Consents. Neither the execution and delivery of this Agreement by Union and Minerals, nor compliance with the terms and provisions of this Agreement by Union and Minerals will conflict with or result in a breach of any of the terms, conditions or provisions of the Certificate of Incorporation or By-laws of Union or any of its subsidiaries or any judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign, to which Union or any of its subsidiaries is subject or of any agreement, contract or commitment to which Union or any subsidiary is a party and which is material to the financial condition or the results of operations of Union and its subsidiaries considered as a whole, or constitute a material default thereunder, or give to any others any interest or rights, including rights of termination, cancellation or acceleration, in or with respect to any of such agreements, contracts or commitments, or otherwise require the consent or approval of any person.

5.06 No Litigation or Adverse Events. There is no suit, action, legal or administrative, arbitration or other proceeding or governmental investigation, pending or as to which Union or any of its subsidiaries has received in writing any claim or assertion, which might individually or in the aggregate, materially and adversely affect the financial condition or results of operations of Union and its subsidiaries considered as a whole, except as set forth in the Union 10-K or in Exhibit 7 attached hereto and by this reference made a part hereof for all purposes.

5.07 Authorization of Agreement. The execution and delivery and, subject to requisite approval by Union, the performance of this Agreement have been duly and validly authorized and approved by the Boards of Directors of Union and Minerals and Union and Minerals have taken, or will use their best efforts to take prior to the Time of Closing, all action required by law, their respective Certificates of Incorporation and By-laws and all other action required to authorize the execution, delivery and performance of this Agreement.

5.08 Registration Statement and Proxy Statement. When the Registration Statement referred to in Article VI or any post-effective amendment thereto shall become effective, and when the Proxy Statement included therein is mailed to Mancos shareholders for the purpose of securing shareholder approval for this Agreement or any amendment or supplement thereto, and at all times subsequent to such effectiveness or mailing up to and including the Time of Closing, such Registration Statement and such Proxy Statement and all amendments or supplements thereto, with respect to all information set forth therein relating to Union and Minerals and in respect to all information set forth therein relating to this Agreement, (i) will comply in all material respects with the provisions of the Securities Act and Exchange Act, respectively, and the rules and regulations of the SEC thereunder and (ii) will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements contained therein not misleading.

5.09 Brokers' or Finders' Fees. Union has incurred no obligation (contingent or otherwise) for brokers' fees or finders' fees in connection with the transactions contemplated by this Agreement.

5.10 Report on Form 10-K. The information included in the Union 10-K previously delivered by Union to Mancos is true and correct in all material respects.

5.11 Correctness of Exhibits. Each of the Exhibits referred to herein delivered by Union to Mancos, pursuant to this Agreement, is substantially complete and the information reported therein is correct as of the date of this Agreement.

ARTICLE VI

TRANSACTIONS PRIOR TO CLOSING

6.01 Investigations of Business of Mancos and Union. Between the date of this Agreement and the Time of Closing, Union, Mancos and Minerals each agree to give the other full access to its premises, books and records for the purpose of investigating its business and the conduct thereof.

6.02 Registration Statement and Proxy Statement. Prior to the Time of Closing, Union shall prepare and file with the SEC a Registration Statement on Form S-14 under the Securities Act for the purpose of registering the shares of Union common stock to be exchanged for the Assets and shall duly comply with all applicable state securities or "Blue Sky Laws." As soon as practicable after the Registration Statement becomes effective, Mancos shall mail the Proxy Statement included in said Registration Statement to its shareholders and shall submit this Agreement to its shareholders for approval as provided by law and its Articles of Incorporation at a meeting which shall be held as soon as practicable after the effective date of the Registration Statement.

6.03 **Listing of Union Common Stock.** Union has obtained, or shall use reasonable efforts to obtain prior to the Time of Closing approval for the listing on the New York, Midwest and Pacific Stock Exchanges upon official notice of issuance of the shares of Union common stock to be exchanged for the Assets.

6.04 **Information for Registration Statement and Proxy Statement.** Mancos and Union shall each furnish to the other such data and information as the other may reasonably request for the purpose of including such data and information in the Proxy Statement or Registration Statement.

ARTICLE VII

CONDITIONS PRECEDENT TO THE CONSUMMATION OF THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT

7.01 **Conditions Applicable to All Parties.** The obligations of Union, Mancos and Minerals are conditioned upon:

A. At the Time of Closing no suit, action, or proceeding being pending or threatened before any court or other governmental agency of the Federal or any state government in which it is sought to restrain or prohibit the consummation of the transactions contemplated hereby; no such other suit, action or proceeding being pending or threatened or no liability or claim have been asserted which would be considered by any Party to be materially significant.

B. The holders of at least two-thirds ($\frac{2}{3}$) of the outstanding stock of Mancos shall have approved this Agreement in accordance with the laws of the State of Colorado, Mancos' Articles of Incorporation, and By-Laws.

C. The Registration Statement shall be effective under the Securities Act and not subject to any "stop order" or threatened stop order.

D. All legal proceedings in connection with the transactions contemplated by this Agreement being satisfactory to each Party's counsel and each Party's counsel having been furnished with such certificates or other evidence of compliance with the conditions as such counsel may reasonably request and Mancos having secured releases, waivers and consents from all of the Parties listed in the Schedule of Consents (Exhibit 3).

E. Consummation and closing of that certain Agreement and Plan of Reorganization dated May 15, 1978, pursuant to which Union and Minerals are to acquire substantially all of the assets of Silver Bell Industries, Inc.

7.02 **Additional Conditions to Mancos' Obligation.** The obligations of Mancos shall be conditioned upon the satisfactory performance or waiver of the following conditions:

A. The performance by Union and Minerals of all of their obligations and covenants hereunder.

B. The substantial accuracy at the Time of Closing of all of the representations made by Union herein.

C. Mancos shall have received from George C. Bond, Esq., General Counsel of Union, or Sam A. Snyder, Esq., Assistant General Counsel of Union, an opinion dated immediately prior to the Time of Closing in form and substance satisfactory to Mancos to the effect that:

(i) Union and each of its subsidiaries, including Minerals, is a corporation duly organized and existing and in good standing under the laws of the jurisdiction of its incorporation;

(ii) Union and each of its subsidiaries, including Minerals, has the corporate power to carry on its business as now being conducted;

(iii) The authorized capital stock of Union consists of 65,000,000 shares of common stock par value Eight and One-Third Dollars (\$8 $\frac{1}{3}$) per share, and stating the number of shares of authorized capital stock of Union which have been issued, that such issued shares have been authorized and are validly issued and outstanding, and are all fully paid and nonassessable, and stating the number of shares which at that date were held for any specific purpose;

(iv) The shares of Union common stock to be issued pursuant to this Agreement at the Time of Closing have been duly authorized and, upon issuance, will be duly and validly issued and will be fully paid and nonassessable;

(v) This Agreement has been duly executed and delivered by Union and Minerals and is a valid and binding obligation upon Union and Minerals and all corporate action by Union and Minerals required under this Agreement has been taken;

(vi) Neither the execution and delivery by Union and Minerals of this Agreement, nor compliance with the terms and provisions hereof will, to the best of the knowledge of such counsel, conflict with or result in a breach of any term, condition or provision of any judgment, order, injunction, decree, regulation or ruling of any court or governmental authority, domestic or foreign, to which Union or Minerals is subject or any material agreement, contract or commitment to which Union or Minerals is a party or by which either it is bound or constitutes a material default thereunder;

(vii) That all consents and approvals required by law, state or federal, and other actions required by law, rule or regulation have been duly taken or obtained in order to permit the consummation of the transactions contemplated by this Agreement.

It is understood that such counsel, in rendering such opinion, is entitled to rely upon the opinions of other counsel for matters relating to local law, including but not by way of limitation, state securities or Blue Sky laws.

D. That owners of not more than an aggregate of twenty percent (20%) of Mancos's outstanding stock have exercised dissenters' rights to receive the fair market value for their stock in accordance with Colorado law.

7.03 Additional Conditions to the Obligations of Union and Minerals. The obligations of Union and Minerals being conditioned upon the satisfactory performance or waiver of the following conditions:

A. The performance by Mancos of all of its obligations and covenants hereunder.

B. At the Time of Closing, the Assets shall be in the same conditions as they were on December 31, 1977, except for ordinary use and changes occurring in the ordinary course of business between that date and the Time of Closing.

C. Mancos having delivered to Union and Minerals such evidence of title to the Assets, including opinions of counsel as it may have in its files and such other title information as Union may reasonably request.

D. Union's counsel having examined title to the Assets in such detail as such counsel deems reasonably appropriate for the examination of mining title and such counsel being reasonably satisfied that subject to minor imperfections as are usual in the case of mining properties that Mancos has title to the Assets together with the right to transfer and assign the Assets to Union and

that Mancos has not created any liens, charges, encumbrances or other burdens on the Assets except those described in the schedule attached to the Assignment and Conveyance of Mineral Property.

E. Union having determined to its satisfaction that all of the representations made herein are substantially accurate in all material respects.

ARTICLE VIII

FRUSTRATION OF AGREEMENT

8.01 **Termination Prior to Closing.** In the event the transactions contemplated by this Agreement are not consummated on or before August 31, 1978 (unless such date is extended by mutual agreement of the parties), because of the non-occurrence of the conditions precedent specified in Article VII or the waiver of the condition of the Party having the right to waive such condition, then this Agreement shall terminate and, except as provided in this Article VIII, no Party shall have any further right or obligation hereunder.

8.02 **Information to be Confidential.** In the event of frustration and termination of this Agreement, all information obtained from another Party pursuant to the terms hereof shall be returned to the Party furnishing such information and all Parties agree not to disclose to any third party any confidential information obtained hereunder.

8.03 **Costs in Event of Frustration.** Each Party shall be responsible for and shall pay any and all costs incurred by it in connection with the transactions contemplated by this Agreement and shall indemnify each other Party against any and all claims with respect thereto.

ARTICLE IX

SURVIVAL OF REPRESENTATIONS AND WARRANTIES AND FURTHER ASSURANCES

9.01 **Survival of Representations and Warranties.** The representations and warranties made by the Parties herein and in the Assignment and Conveyance of Mineral Properties shall survive the Time of Closing.

9.02 **Further Assurances.** At and after the Time of Closing at any time and from time to time as long as it is authorized by law to do so, upon the request of Minerals, and at the expense of Minerals, Mancos shall execute and deliver to Minerals such further instruments of conveyance, assignment and transfer and take such further action as Minerals may request to effectively convey, assign, transfer and deliver the Assets pursuant to this Agreement.

ARTICLE X

MISCELLANEOUS

10.01 **Mancos Affiliates.** "Mancos Affiliates" means each person (other than Mancos) who, should such person resell Union common stock acquired by him as a distribution in liquidation from Mancos, may be deemed to be subject to the requirements of Paragraphs (c) and (d) of Rule 145 under the Securities Act. Mancos, in connection with its distribution of Union common stock to its shareholders, shall require such Mancos Affiliates to sign and deliver to Union a letter corresponding to the text set forth in Exhibit 8, attached hereto and by this reference made a part hereof for all purposes. Union, on direction from Mancos, shall then imprint appropriate legends on the stock certificates representing the shares to be distributed to such affiliates, imposing restrictions on the rights of resale of such shares to the extent such restrictions continue to exist at the time the shares are distributed by Mancos to Mancos Affiliates.

10.02 **Allocation of Costs.** The costs incurred in preparing for and consummating the transaction contemplated hereby shall be allocated as follows:

A. To Mancos:

- (i) The cost of obtaining consents and waivers.
- (ii) The cost of curing title to the Assets, if any.
- (iii) All of its own counsel and accounting fees and the cost of securing shareholder approval.

B. To Union:

- (i) The cost of preparing the Registration Statement.
- (ii) All counsel and accounting fees incurred by Union, including those relating to title examination.
- (iii) The cost of recording the documents transferring the Assets.
- (iv) All stock exchange application and listing fees associated with the common stock to be issued to Mancos hereunder.

10.03 **Applicable Law.** This Agreement and the legal relations between the Parties shall be governed by and construed in accordance with the law and jurisprudence of the State of California, excluding that body of law referred to as conflicts of law.

10.04 **Notices.** Any notices or communications required or permitted hereunder shall be sufficiently given if delivered or mailed by certified mail, postage prepaid, as follows:

To Union:

Union Oil Company of California
P.O. Box 7600
Los Angeles, California 90051
Attention: Claude S. Brinegar
Vice President

To Minerals:

Minerals Exploration Company
P.O. Box 54945
Los Angeles, California 90054
Attention: E. H. Eakland, Jr.
President

To Mancos:

The Mancos Corporation
P.O. Box 550
Rocky Ford, Colorado 81067
Attention: Earl J. Brubaker
President

Or at such addresses as hereinafter may be furnished in writing by each Party hereto to the other Party.

10.05 **Schedule of Exhibits.** The following exhibits are attached and by reference made a part of this Agreement:

- Exhibit 1 — Assignment and Conveyance of Mineral Properties
- Exhibit 2 — Schedule of Obligations
- Exhibit 3 — Schedule of Consents
- Exhibit 4 — List of Union's Stock Plans
- Exhibit 5 — List of Claims against Union
- Exhibit 6 — Schedule of Material Changes
- Exhibit 7 — Schedule of Material Litigation
- Exhibit 8 — Rule 145 Agreement

Such exhibits may be amended and corrected by the mutual agreement of the Parties.

10.06 **Headings.** The descriptive headings of the several Articles, Sections and Paragraphs of this Agreement are inserted for convenience only and do not constitute a part of this Agreement.

10.07 **Amendments.** Any and all amendments to this Agreement must be in writing and executed by all of the parties hereto.

10.08 **Counterparts.** This Agreement may be executed in several counterparts, each of which shall constitute one and the same Agreement.

IN WITNESS WHEREOF, the Parties have caused this instrument to be executed on the day and year above written.

UNION OIL COMPANY OF CALIFORNIA

Attest:

By CLAUDE S. BRINEGAR

J. R. COURTNEY

Assistant Secretary

THE MANCOS CORPORATION

Attest:

By EARL J. BRUBAKER

President

FRANK JOBE

MINERALS EXPLORATION COMPANY

Attest:

By EDWARD H. EAKLAND, JR.

J. R. COURTNEY

Union Oil Company of California
Union Oil Center, Los Angeles, California 90017



Claude S. Brinegar
Senior Vice President

October 10, 1978

The Mancos Corporation
Rocky Ford, Colorado

Attention: Earl J. Brubaker
President

RE: Amendment to Agreement and
Plan of Reorganization
dated June 21, 1978

Gentlemen:

This letter, when accepted by The Mancos Corporation ("Mancos"), shall constitute an amendment to the Agreement and Plan of Reorganization dated June 21, 1978 between Union Oil Company of California, Minerals Exploration Company and Mancos, whereby the date of August 31, 1978, appearing in Article III, Section 3.01 and in Article VIII, Section 8.01 of said Agreement is deleted and the date of December 15, 1978 is hereby substituted.

If the foregoing meets with your approval, please sign the duplicate of this letter and return it to the undersigned.

Very truly yours,

UNION OIL COMPANY OF CALIFORNIA

By CLAUDE S. BRINEGAR
Claude S. Brinegar
Senior Vice President

Agreed to this th day of October, 1978

THE MANCOS CORPORATION

By EARL J. BRUBAKER
Earl J. Brubaker
President

MINERALS EXPLORATION COMPANY

CLAUDE S. BRINEGAR
Claude S. Brinegar
Vice President

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EXHIBIT 8

**ATTACHED TO AND BY REFERENCE
MADE A PART OF THE AGREEMENT
AND PLAN OF REORGANIZATION
DATED THE 15th DAY OF MAY, 1978**

RULE 145 AGREEMENT

Union Oil Company of California
461 South Boylston Street
Los Angeles, California 90017

Gentlemen:

I have been advised that I may be deemed an "affiliate" within the meaning of paragraph (c) of Rule 145 of the Rules and Regulations of the Securities and Exchange Commission ("SEC") under the Securities Act of 1933, as amended (the "Act"), of Silver Bell Industries, Inc., a Colorado corporation ("Silver Bell"), and might have been deemed such at the time the assets of Silver Bell were exchanged for shares of common stock, par value \$8 1/3 per share (the "Shares") of Union Oil Company of California, a California corporation ("Union"), as part of Silver Bell's Plan of Reorganization. Pursuant to the Plan of Reorganization, I will acquire the Shares.

I have been advised that the issuance of the Shares to me pursuant to the Plan of Reorganization has been registered under the Act on a registration statement on SEC Form S-14. I have also been advised that I was deemed an "affiliate" of Silver Bell and consequently any public offering or sale by me of any of the Shares will, under current law, require either (i) the further registration under the Act of the Shares to be sold or (ii) compliance with Rule 145 promulgated under the Act or (iii) the availability of another exemption from such registration.

I represent and warrant to Union that:

1. I have carefully read this letter and discussed its requirements and other applicable limitations upon the sale, transfer or other disposition of the Shares, to the extent I felt necessary, with my counsel or counsel of Silver Bell.
2. I have been informed by Union that the distribution by me of the Shares has not been registered under the Act and that the Shares must be held by me indefinitely unless (i) such distribution of the Shares has been registered under the Act, (ii) a sale of the Shares is made in conformity with the volume and other applicable limitations of paragraph (d) of Rule 145 promulgated by the SEC under the Act, or (iii) some other exemption from registration is available with respect to any such proposed sale, transfer or other disposition of the Shares.
3. I understand that Union is under no obligation to register the sale, transfer or other disposition of the Shares by me or on my behalf or to take any other action necessary in order to make compliance with an exemption from registration available.
4. I also understand that stop transfer instructions will be given to Union's transfer agents with respect to the Shares and that there will be placed on the certificates for the Shares, or any substitutions therefor, a legend stating in substance;

"The shares represented by this certificate were issued in a transaction to which Rule 145 promulgated under the Securities Act of 1933, as amended (the "Act"), applies and may only be sold in compliance with applicable requirements of Rule 145 promulgated under the Act or sold or otherwise transferred pursuant to a registration statement under the Act of an exemption from such registration."

Very truly yours,

Union agrees that promptly upon the written request of the other party hereto setting forth a proposed sale complying with the requirements of the foregoing legend and supplying such other assurances as Union may reasonably request, Union will promptly take such action as may be required to facilitate the proposed transfer, including without limitation, the giving of appropriate instructions to the transfer agent for the Union common stock.

UNION OIL COMPANY OF CALIFORNIA

By _____

ANNEX VI

EXHIBIT 8

ATTACHED TO AND BY REFERENCE
MADE A PART OF THE AGREEMENT
AND PLAN OF REORGANIZATION
DATED THE 21st DAY OF JUNE, 1978

RULE 145 AGREEMENT

Union Oil Company of California
461 South Boylston Street
Los Angeles, California 90017

Gentlemen:

I have been advised that I may be deemed an "affiliate" within the meaning of paragraph (c) of Rule 145 of the Rules and Regulations of the Securities and Exchange Commission ("SEC") under the Securities Act of 1933, as amended (the "Act"), of The Mancos Corporation, a Colorado corporation ("Mancos"), and might have been deemed such at the time the assets of Mancos were exchanged for shares of common stock, par value \$8 $\frac{1}{3}$ per share (the "Shares") of Union Oil Company of California, a California corporation ("Union"), as part of Mancos' Plan of Reorganization. Pursuant to the Plan of Reorganization, I will acquire the Shares.

I have been advised that the issuance of the Shares to me pursuant to the Plan of Reorganization has been registered under the Act on a registration statement on SEC Form S-14. I have also been advised that I was deemed an "affiliate" of Mancos and consequently any public offering or sale by me of any of the Shares will, under current law, require either (i) the further registration under the Act of the Shares to be sold or (ii) compliance with Rule 145 promulgated under the Act or (iii) the availability of another exemption from such registration.

I represent and warrant to Union that:

1. I have carefully read this letter and discussed its requirements and other applicable limitations upon the sale, transfer or other disposition of the Shares, to the extent I felt necessary, with my counsel or counsel of Mancos.
2. I have been informed by Union that the distribution by me of the Shares has not been registered under the Act and that the Shares must be held by me indefinitely unless (i) such distribution of the Shares has been registered under the Act, (ii) a sale of the Shares is made in conformity with the volume and other applicable limitations of paragraph (d) of Rule 145 promulgated by the SEC under the Act, or (iii) some other exemption from registration is available with respect to any such proposed sale, transfer or other disposition of the Shares.
3. I understand that Union is under no obligation to register the sale, transfer or other disposition of the Shares by me or on my behalf or to take any other action necessary in order to make compliance with an exemption from registration available.
4. I also understand that stop transfer instructions will be given to Union's transfer agents with respect to the Shares and that there will be placed on the certificates for the Shares, or any substitutions therefor, a legend stating in substance;

"The shares represented by this certificate were issued in a transaction to which Rule 145 promulgated under the Securities Act of 1933, as amended (the "Act"), applies and may only be sold in compliance with applicable requirements of Rule 145 promulgated under the Act or sold or otherwise transferred pursuant to a registration statement under the Act of an exemption from such registration."

Very truly yours,

Union agrees that promptly upon the written request of the other party hereto setting forth a proposed sale complying with the requirements of the foregoing legend and supplying such other assurances as Union may reasonably request, Union will promptly take such action as may be required to facilitate the proposed transfer, including without limitation, the giving of appropriate instructions to the transfer agent for the Union common stock.

UNION OIL COMPANY OF CALIFORNIA

By _____

COLORADO CORPORATION CODE § 7-4-123

Rights of dissenting shareholders upon sale or exchange of assets not in the usual course of business. — (1) Except as otherwise provided in this section, any shareholder has the right to dissent from any sale, lease, exchange, or other disposition referred to in section 7-5-112 (2) of all or substantially all of the property and assets, with or without goodwill, of the corporation if not made in the usual and regular course of its business, including a sale in dissolution but not including a sale pursuant to an order of a court having jurisdiction in the premises or a sale for cash on terms requiring that all or substantially all of the net proceeds of sale be distributed to the shareholders in accordance with their respective interests within one year after the date of sale. No such right to dissent shall apply to a mortgage or pledge of any or all of the property and assets of a corporation pursuant to section 7-5-112 (2).

(2) A shareholder may dissent as to less than all of the shares registered in his name. In that event, his rights shall be determined as if the shares as to which he has dissented and his other shares were registered in the names of different shareholders.

(3) Any shareholder electing to exercise his right of dissent shall file with the corporation, prior to or at the meeting of shareholders at which the proposed transaction is submitted to a vote, a written objection to such proposed transaction. If such proposal is approved by the required vote and the shareholder has not voted in favor thereof, the shareholder, within ten days after the date on which the vote was taken, may make written demand on the corporation for payment of the fair value of his shares, and if the transaction is effected, such corporation shall pay to the shareholder, upon surrender of the certificates representing such shares, the fair value thereof as of the day prior to the date on which the vote was taken approving the proposed corporate action, exclusive of any element of value arising from the expectation or accomplishment of the transaction. Any shareholder failing to make demand within the ten-day period shall be bound by the terms of the proposed transaction. Any shareholder making such demand shall thereafter be entitled only to payment as provided in this section and shall not be entitled to vote or to exercise any other rights of a shareholder.

(4) No such demand may be withdrawn unless the corporation consents thereto. If, however, such demand is withdrawn upon consent; or if the proposed transaction is abandoned or rescinded or the shareholders revoke the authority to effect such proposed transaction, or if no demand or petition for the determination of fair value by a court of competent jurisdiction has been made or filed within the time provided in this section, or if a court of competent jurisdiction determines that the shareholder is not entitled to the relief provided by this section, the right of the shareholder to be paid the fair value of his shares shall cease and his status as a shareholder shall be restored without prejudice to any corporate proceedings which may have been taken during the interim.

(5) Within thirty days after the transaction is effected, the corporation shall give written notice thereof to each dissenting shareholder who has made demand as provided in this section and shall make a written offer to each such shareholder to pay for such shares at a specified price deemed by the corporation to be the fair value thereof. Such notice and offer shall be accompanied by a balance sheet of the corporation the shares of which the dissenting shareholder holds as of the latest available date and not more than twelve months prior to the making of such offer, and a profit and loss statement of such corporation for the twelve-month period ending on the date of such balance sheet.

(6) If within fifty days after the date on which the transaction was effected the fair value of such shares is agreed upon between any dissenting shareholder and the corporation, payment therefor shall be made within ninety days after the date on which the transaction was effected upon surrender of the certificates representing such shares. Upon payment of the agreed value, the dissenting shareholder shall cease to have any interest in such shares.

(7) If within said fifty-day period a dissenting shareholder and the corporation do not so agree, the corporation, within thirty days after receipt of written demand from any dissenting shareholder given within sixty days after the date on which the transaction was effected, shall file, or at its election at anytime within such period of sixty days may file, a petition in the district court for the county or city and county in this state where the registered office of the corporation is located requesting that the fair value of such shares be determined. If the corporation fails to institute the proceedings as provided in this subsection (8), any dissenting shareholder may do so in the name of the corporation. All dissenting shareholders, except those who have previously agreed with the corporation as to the fair value of their shares, wherever residing, shall be made parties to the proceeding as an action against their shares quasi in rem. A copy of the petition shall be served on each such dissenting shareholder who is a resident of this state and shall be served by registered mail on each such dissenting shareholder who is a nonresident. Service on nonresidents shall also be made by publication as provided by law. The jurisdiction of the court shall be plenary and exclusive. All shareholders who are parties to the proceeding shall be entitled to judgment against the corporation for the amount of the fair value of their shares. The court, if it so elects, may appoint one or more persons as appraisers to receive evidence and recommend a decision on the question of fair value. The appraisers shall have such power and authority as is specified in the order of their appointment or an amendment thereof. The judgment shall be payable only upon and concurrently with the surrender to the corporation of the certificates representing such shares. Upon payment of the judgment, the dissenting shareholder shall cease to have any interest in such shares.

(8) The judgment shall include an allowance for interest, at such rate as the court determines to be fair and equitable in all the circumstances, from the date on which the vote was taken on the transaction to the date of payment.

(9) The costs and expenses of any such proceeding shall be determined by the court and assessed against the corporation, but all or any part of such costs and expenses may be apportioned and assessed as the court deems equitable against any of the dissenting shareholders who are parties to the proceeding and to whom the corporation has made an offer to pay for the shares if the court finds that the action of the shareholders in failing to accept such offer was arbitrary, vexatious, or not in good faith. Such expenses shall include reasonable compensation for and reasonable expenses of the appraisers but shall exclude the fees and expenses of counsel for and experts employed by any party; but if the fair value of the shares as determined materially exceeds the amount which the corporation offered to pay therefor or if no offer was made, the court, in its discretion, may award to any shareholder who is a party to the proceeding such sum as the court determines to be reasonable compensation for any expert employed by the shareholder in the proceeding.

(10) Within twenty days after demanding payment for his shares, each shareholder demanding payment shall submit the certificates representing his shares to the corporation for notation thereon that such demand has been made. His failure to do so, at the option of the corporation, shall terminate his rights under this section unless a court of competent jurisdiction, for good and sufficient cause shown, otherwise directs. If shares represented by a certificate on which notation has been so made are transferred, each new certificate issued therefor shall bear similar notation, together with the name of the original dissenting holder of such shares, and a transferee of such shares shall not acquire by the transfer any rights in the corporation other than those which the original dissenting shareholder had after making demand for payment of the fair value thereof.

(11) Shares acquired by a corporation pursuant to this section may be held and disposed of by a corporation as in the case of other treasury shares. (§ 7-4-123, added.)

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 3. Interest of Experts Named in Registration Statement.

None.

Item 4. Indemnification of Directors and Officers.

ARTICLE IV of Union Oil Company of California's By-Laws provide as follows:

"The corporation shall, to the maximum extent permitted by the General Corporation Law of California, indemnify each of its directors and officers against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding arising by reason of the fact any such person is or was a director or officer of the corporation and shall advance to such director or officer expenses incurred in defending any such proceeding to the maximum extent permitted by such law. For purposes of this section, a "director" or "officer" of the corporation includes any person who is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, or other enterprise, or was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation. The board of directors may in its discretion provide by resolution for such indemnification of, or advance of expenses to, other employees or agents of the corporation, and likewise may refuse to provide for such indemnification or advance of expenses except to the extent such indemnification is mandatory under the California General Corporation law."

The subject of indemnification of directors and officers is governed by Section 317 of the California General Corporation Law. The text of this Section is set forth below.

(a) For the purposes of this section, "agent" means any person who is or was a director, officer, employee or other agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise, or was a director, officer, employee or agent of a foreign or domestic corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation; "proceeding" means any threatened, pending or completed action or proceeding, whether civil, criminal, administrative or investigative; and "expenses" includes without limitation attorneys' fees and any expenses of establishing a right to indemnification under subdivision (d) or paragraph (3) of subdivision (e).

(b) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any proceeding (other than an action by or in the right of the corporation) by reason of the fact that such person is or was an agent of the corporation, against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with such proceeding if such person acted in good faith and in a manner such person reasonably believed to be in the best interests of the corporation and, in the case of a criminal proceeding, had no reasonable cause to believe the conduct of such person was unlawful. The termination of any proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in the best interests of the corporation or that the person had reasonable cause to believe that the person's conduct was unlawful.

(c) A corporation shall have power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person is or was an agent of the corporation, against expenses actually and reasonably incurred by such person in connection with the defense or settlement of such action if such person acted in good faith, in a manner such person believed to be in the best interests of the corporation and with such care, including reasonable inquiry, as an ordinarily prudent person in a like position would use under similar circumstances. No indemnification shall be made under this subdivision (c):

(1) In respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation in the performance of such person's duty to the

corporation, unless and only to the extent that the court in which such action was brought shall determine upon application that, in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for the expenses which such court shall determine;

(2) Of amounts paid in settling or otherwise disposing of a threatened or pending action, with or without court approval; or

(3) Of expenses incurred in defending a threatened or pending action which is settled or otherwise disposed of without court approval.

(d) To the extent that an agent of a corporation has been successful on the merits in defense of any proceeding referred to in subdivision (b) or (c) or in defense of any claim, issue or matter therein, the agent shall be indemnified against expenses actually and reasonably incurred by the agent in connection therewith.

(e) Except as provided in subdivision (d), any indemnification under this section shall be made by the corporation only if authorized in the specific case, upon a determination that indemnification of the agent is proper in the circumstances because the agent has met the applicable standard of conduct set forth in subdivision (b) or (c), by:

(1) A majority vote of a quorum consisting of directors who are not parties to such proceeding;

(2) Approval of the shareholders (Section 153), with the shares owned by the person to be indemnified not being entitled to vote thereon; or

(3) The court in which such proceeding is or was pending upon application made by the corporation or the agent or the attorney or other person rendering services in connection with the defense, whether or not such application by the agent, attorney or other person is opposed by the corporation.

(f) Expenses incurred in defending any proceeding may be advanced by the corporation prior to the final disposition of such proceeding upon receipt of an undertaking by or on behalf of the agent to repay such amount unless it shall be determined ultimately that the agent is entitled to be indemnified as authorized in this section.

(g) No provision made by a corporation to indemnify its or its subsidiary's directors or officers for the defense of any proceeding, whether contained in the articles, bylaws, a resolution of shareholders or directors, an agreement or otherwise, shall be valid unless consistent with this section. Nothing contained in this section shall affect any right to indemnification to which persons other than such directors and officers may be entitled by contract or otherwise.

(h) No indemnification or advance shall be made under this section, except as provided in subdivision (d) or paragraph (3) of subdivision (c), in any circumstance where it appears:

(1) That it would be inconsistent with a provision of the articles, bylaws, a resolution of the shareholders or an agreement in effect at the time of the accrual of the alleged cause of action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(2) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

(i) A corporation shall have power to purchase and maintain insurance on behalf of any agent of the corporation against any liability asserted against or incurred by the agent in such capacity or arising out of the agent's status as such whether or not the corporation would have the power to indemnify the agent against such liability under the provisions of this section.

(j) This section does not apply to any proceeding against any trustee, investment manager or other fiduciary of an employee benefit plan in such person's capacity as such, even though such person may also be an agent as defined in subdivision (a) of the employer corporation. Nothing contained in this section shall limit any right to indemnification to which such a trustee, investment manager or other fiduciary may be entitled by contract or otherwise, which shall be enforceable to the extent permitted by applicable law other than this section.

U 003103

Insofar as indemnification for liabilities arising under the Securities Act of 1933 by the registrant may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing

provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

Under a directors' and officers' liability insurance policy, directors and officers of Union Oil Company of California are insured against certain liabilities, including certain liabilities under the Securities Act of 1933.

Item 5. Exhibits Filed.

The following Exhibits are filed as part of this Registration Statement:

Exhibit No.	Description
1-1	Agreement and Plan of Reorganization dated as of the 15th day of May, 1978 among Silver Bell Industries, Inc., Union Oil Company of California and Minerals Exploration Company (included as Annex III to the Proxy Statement filed as part of this Registration Statement). (Exhibits omitted.)*
1-2	Agreement and Plan of Reorganization dated as of the 21st day of June, 1978 among The Mancos Corporation, Union Oil Company of California and Minerals Exploration Company (included as Annex IV to the Proxy Statement filed as part of this Registration Statement). (Exhibits omitted.)*
1-3	Letter dated August 7, 1978 from Union Oil Company of California and Mineral Exploration Company to Silver Bell Industries, Inc. (included as part of Annex III).*
1-3(a)	Letter dated October 10, 1978 from Union Oil Company of California and Minerals Exploration Company to Silver Bell Industries, Inc. (included as part of Annex III).
1-4	Letter dated August 7, 1978 from Union Oil Company of California and Minerals Exploration Company to the Mancos Corporation (included as part of Annex IV).*
1-4(a)	Letter dated October 10, 1978 from Union Oil Company of California and Minerals Exploration Company to The Mancos Corporation (included as part of Annex IV).
1-5	Plan of Liquidation, Distribution of Shares and Dissolution of Silver Bell Industries, Inc. (included as Annex I to the Proxy Statement filed as part of this Registration Statement).*
1-6	Plan of Liquidation, Distribution of Shares and Dissolution of The Mancos Corporation (included as Annex II to the Proxy Statement filed as part of this Registration Statement).*
2-1	Form of Proxy for holders of Common Stock of Silver Bell Industries, Inc.*
2-2	Form of Proxy for holders of Common Stock of The Mancos Corporation.*
5-1	Opinions of George C. Bond, Esq.*
5-2	Opinions of Reardon, Reardon and Reardon.*
5-2(a)	Supplemental Opinions of Reardon, Reardon and Reardon.
6-(a)	Specimen certificate for Common Stock, par value \$8 1/3 per share, of Union Oil Company of California.*
(b)	Articles of Incorporation and By-laws of Union Oil Company of California.*
7-1	Interim Agreement dated the 6th day of September, 1973, by and between Silver Bell Industries, Inc. and The Mancos Corporation.
7-2	Conditional Release dated the 19th day of June, 1978, by and between Silver Bell Industries, Inc. and The Mancos Corporation.
7-3	Operating Agreement dated the 9th day of May, 1969, by and between Nuclear Reserves Incorporated and Minerals Exploration Company.

* Previously filed and not refiled pursuant to Rule 472(d).

U 003104

Item 6. Undertaking to File Prospectuses as Amendments.

The undersigned registrant hereby undertakes as follows:

(a) That prior to any public reoffering of the securities registered hereunder through the use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the registrant undertakes that such reoffering prospectus will contain, or will be amended to contain the information called for by Item 2 with respect to the securities to be so offered, in addition to the information called for by the other items of Form S-14.

(b) That every prospectus which is filed pursuant to paragraph (a) above, or which purports to meet the requirements of Section 10(a)(3) of the Act, will be filed as a part of an amendment to the registration statement and will not be used until such amendment has become effective, and that for the purpose of determining liabilities under the Act, the effective date of such amendment shall be deemed the effective date of the registration statement with respect to securities sold after such amendment has become effective.

(c) The undersigned registrant hereby undertakes to remove from registration by means of a post-effective amendment any of the securities being registered which are not issued pursuant to the Agreement of Merger or Agreement and Plan of Reorganization and to furnish the Division of Corporation Finance with a letter informing such Division when all of the securities registered have been issued.

U 003105

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement or amendment to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Los Angeles, and State of California, on the 10th day of October, 1978.

UNION OIL COMPANY OF CALIFORNIA

By W. R. CRAIG
(W. R. Craig, Treasurer)

Pursuant to the requirements of the Securities Act of 1933, this registration statement or amendment has been signed below by the following persons in the capacities and on the dates indicated:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>FRED L. HARTLEY*</u> (Fred L. Hartley)	Chairman of the Board, President and Director (Principal Executive Officer)	October 10, 1978
<u>PHILIP BLAMEY*</u> (Philip Blamey)	Vice President (Principal Financial Officer)	October 10, 1978
<u>LYLE C. RUTHERFORD*</u> (Lyle C. Rutherford)	Comptroller (Principal Accounting Officer)	October 10, 1978
<u>WILLIAM F. BALLHAUS*</u> (William F. Ballhaus)	Director	October 10, 1978
<u>CLAUDE S. BRINEGAR*</u> (Claude S. Brinegar)	Director	October 10, 1978
<u>RAY A. BURKE*</u> (Ray A. Burke)	Director	October 10, 1978
<u>ROBERT DI GIORGIO*</u> (Robert Di Giorgio)	Director	October 10, 1978
<u>WILLIAM H. DOHENY*</u> (William H. Doheny)	Director	October 10, 1978
<u>(Prentis C. Hale)</u>	Director	
<u>LEWIS B. HARDER*</u> (Lewis B. Harder)	Director	October 10, 1978
<u>T. C. HENDERSON*</u> (T. C. Henderson)	Director	October 10, 1978
<u>DONALD P. JACOBS*</u> (Donald P. Jacobs)	Director	October 10, 1978
<u>W. S. McCONNOR*</u> (W. S. McConnor)	Director	October 10, 1978
<u>PETER O'MALLEY*</u> (Peter O'Malley)	Director	October 10, 1978
<u>CHARLES F. PARKER*</u> (Charles F. Parker)	Director	October 10, 1978
<u>DONN B. TATUM*</u> (Donn B. Tatum)	Director	October 10, 1978

*By W. R. CRAIG
(W. R. Craig, Attorney-in-Fact)

U 003106

CONSENT OF COUNSEL

We consent to the references to our firm in the Summary of the Joint Proxy Statement, the Joint Proxy Statement and the Registration Statement and to the filing of our opinions dated August 1, 1978, and August 25, 1978, and supplements thereto dated October 9, 1978, as exhibits to the Registration Statement.

REARDON, REARDON AND REARDON
a professional corporation

By GENE F. REARDON
Gene F. Reardon

Denver, Colorado
October 9, 1978

U 003107

CONSENTS OF INDEPENDENT PUBLIC ACCOUNTANTS

We consent to the inclusion in this Registration Statement of our Report dated June 19, 1978, accompanying the financial statements of Silver Bell Industries, Inc. We also consent to all references to our firm in the joint proxy statement forming part of such Registration Statement.

COOPERS & LYBRAND

2300 Prudential Plaza
Denver, Colorado
September 5, 1978

U 003108

CONSENT OF COUNSEL

The consent of George C. Bond, Vice President and General Counsel of Union Oil Company of California, is included in the opinion filed as Exhibit 5 to the Registration Statement.

U 003109

CONSENT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

We consent to the inclusion in this Registration Statement of our Report dated February 14, 1978, accompanying the consolidated financial statements of Union Oil Company of California. We also consent to all references to our firm in the joint proxy statement forming part of such Registration Statement.

COOPERS & LYBRAND

Los Angeles, California
September 5, 1978

CONSENTS OF INDEPENDENT PUBLIC ACCOUNTANTS

We consent to the inclusion in this Registration Statement of our Disclaimer of Opinion dated March 2, 1978 (except for Notes 3 and 6 as to which the dates are March 31, 1978 and September 27, 1978), accompanying the financial statements of The Mancos Corporation. We also consent to all references to our firm in the joint proxy statement forming part of such Registration Statement.

GRIMSLEY, WHITE & COMPANY

Rocky Ford, Colorado
September 27, 1978

R. L. HUMPHREY

JUL 18 1991

DARRELL S. ELLIOTT, P.C.

ATTORNEYS AT LAW

STEELE PARK BUILDING

50 SOUTH STEELE - SUITE 777

DENVER, COLORADO 80209

303-329-0331

FAX 303-329-0207

DARRELL S. ELLIOTT
JOHN C. STEWART
CURTIS R. SPENCER, JR.

July 16, 1991

Patrick Morgan, Esq.
General Counsel
Umetco Minerals Corporation
39 Old Ridgeburg Road, #E-2267
Danbury, Connecticut 06810

**KNUCKLES (SILVER BELL) LEASE
SAN JUAN COUNTY, UTAH
OUR FILE NUMBER: 89-3091**

Dear Mr. Morgan:

This letter supplements our letter to you of May 15, 1991. As we indicated in that letter, our client's Business Development Department compiled data to compare royalties actually received by MinEx with royalties which should have been payable if the royalty basis of the First Lease had been used. Such a compilation has been prepared with respect to vanadium values, and a copy of the same is enclosed. A similar comparison of values for Uranium indicated no significant differences between amounts actually received and those which should have been received. Therefore, no data for uranium is enclosed.

By way of explanation, the column indicating price per pound for V205 values is taken from the magazine Metal Bulletin based on material from Highveld Steel and Vanadium Corp., Ltd. The final column, indicating adjustments to values, is based on the GNP deflator. The GNP deflator needed to calculate the increase in inflation from 1990 to 1991 is not yet published and was taken as 3%.

Please consider this letter to be a demand on behalf of our client, Molycorp, Inc., successor in interest to Minerals Exploration Co., for payment in the amount of \$199,837.00 as compensation for underpayment of overriding royalties pursuant to the Assignment Agreement of October 5, 1971. In addition, we reiterate that all future royalties should be paid to our client using the First Lease royalty basis.

U 004989

On June 13, 1991 you indicated to this office that you would be responding to our earlier letter shortly. However, to date, we have received no response from you. Once again, we would like to state our genuine desire that discussions take place in this matter toward reaching an amicable resolution.

Sincerely,

DARRELL S. ELLIOTT, P.C.

John C. Stewart

DSE:sh

Enclosure

xc: Darrell S. Elliott (w/o enclosure)
Robert L. Humphrey (w/enclosure)
Gary R. Morris (w/enclosure)
Alan S. Levy (w/enclosure)
Don H. Sherwood (w/enclosure)
Gene T. Yoder (w/enclosure)

U-201-1.004

U 004990

JUN 28 1991

UNOCAL 

MOLYCORP

June 27, 1991
113.ASL

TO: Gary R. Morris

FROM: Alan S. Levy *ASL*

RLH

Umetco Production Payments from Knuckles Lease

As you know, Molycorp is the successor in interest to many of the properties of Minerals Ex Company (Min Ex), which is the successor in interest to Silver Bell Mines Co. Silver Bell Mines signed a lease agreement with a Mr. W.T. Knuckles for the purpose of production of uranium and vanadium from his property in San Juan County, Utah. The lease was subsequently assigned to Union Carbide (Umetco Minerals Corporation). The net result of these transactions is that Molycorp has an overriding royalty interest in the Knuckles lease equal to 5% (escalated from an original 3%) of the value of the ore and bonuses.

Several months ago, you requested that I provide a comparison between the royalties that Umetco has actually paid to Minerals Exploration Company (Min Ex) for the uranium and vanadium values contained in ore removed from the Knuckles Lease to the calculated values of these same royalties. This has proved to be very difficult. At the time of the signing of the lease, the Atomic Energy Commission (AEC) had ore-buying stations and therefore there was a readily determined price for such ores. The pricing mechanism was detailed in their publication, "Domestic Uranium Program Circular 5" and subsequent revisions. Sometime thereafter, the method of valuation of uranium and vanadium values changed from an ore to a product basis. It was probably for this reason that Umetco changed its calculation of payments to Mr. Knuckles to a different method. This would have been the proper time for Umetco to have also renegotiated the payment basis contained in our lease assignment with them. A comparison between ore-based valuation and product-based payments has been made much more difficult by Umetco's failure to do this.

TO: Gary R. Morris
FROM: Alan S. Levy

- 2 -

June 27, 1991
113.ASL

Because of this difficulty, I have instead compared the royalties that Umetco actually paid to us versus a lower royalty percentage based on the value of the yellowcake and value of the V205. The source of this data is from schedules provided by the law firm of Darrell S. Elliot, P.C. The schedules list payments from January 1, 1979 to July 19, 1990, which appear to be mostly on a monthly basis. Prior to 1979 the payments went to Silver Bell, not to Min Ex and were not included. The uranium schedule has the following column headings: "Total Dry Tons", "Dry Lbs of U308", "U308 Av 6 Months Sales Price/Lb", "Payment Received for U308" and "Dry Lbs U308 X Price X 1.2%". Beginning on February 12, 1980, the percentage value in the last column is increased to 2%. The other schedule has a similar layout, except that V205 is substituted for U308 and there is a footnote that says, "Source of V205 price is approximate mid-point of free market 98% pentoxide published in Metals Week". However, the additional amounts of money described in Circular 5 as "Mine Development Allowance," "Initial Production Bonus on 10,000 lbs," and "Haulage Allowance" which may very rightly have been subject to our royalty are not accounted for.

The main use of these schedules is to allow a comparison of the payments actually received from Umetco and a calculated value for the payment. The uranium schedule shows that Umetco paid Min Ex a total of \$254,557.10 and that the calculated value was \$240,984.33. Either Min Ex was: A) overpaid by an amount of \$13,572.77, or B) the 5% difference (the difference between the two numbers divided by the amount of payments) is an indication of the accuracy of the quoted "price per pound" values for uranium or C) is some function of the difference between calculating royalties on an ore versus a yellowcake basis.

Exhibit 1 (see attached) is a similar exercise for vanadium. It shows that Umetco paid Min Ex a total of \$48,640.58 and that the calculated value is \$173,948.54. If the total underpayment for each year is adjusted by the GNP deflator, a total amount owed by Umetco to Molycorp is \$182,369 in 1991 dollars. The GNP deflator needed to calculate the increase in inflation for 1990 to 1991 is not yet published and was taken as 3 percent.

However, there is a discrepancy between the price per pound numbers in this Exhibit and the actual values that I extracted from old issues of Metals Week magazine. Metals Week listed only a Producer Price of \$3.35 to 3.65 per pound of V205, between May 15, 1981 and July 4, 1988. This observation led me to two conclusions: that the Producer price was significantly higher than the values listed in the schedule and that the values in the schedule had a somewhat different source. I spoke with Mr. John Stewart of

U 004994

TO: Gary R. Morris
FROM: Alan S. Levy

- 3 -

June 27, 1991
113.ASL

Darrell S. Elliot, P.C.'s office and learned that the price numbers were from a source actively engaged in the vanadium business and were a hybrid of Metals Week published values and internal numbers from that source's firm.

Exhibit 2 is a similar calculation except that the price per pound of V2O5 values are from the magazine Metal Bulletin based on material from Highveld Steel and Vanadium Corp. Ltd. Based on these values, Umetco has underpaid Min Ex by an amount of \$199,837 in 1991 dollars.

At this time I am not prepared to make an estimate of how much, if any additional amounts Umetco might owe us relating to the bonuses and allowances described in AEC Circular 5 .

If you have any further questions about these calculations, please do not hesitate to call me.

ASL:tsb

cc: Darrell S. Elliot, Esq.
Robert L. Humphrey
John O. Landreth
John C. Stewart, Esq.

U 004995

Molycorp
A.S. Levy
June 21, 1991

EXHIBIT 1
MINERALS EXPLORATION COMPANY - KNUCKLES LEASE
SCHEDULE OF ROYALTY PAYMENTS - VANADIUM

		Metals Week Adj. V205 price/lb	Dry Lbs V205	Rcvd. from Umetco (\$)	Dry Lbs X Price X 1.2% (\$)	Amount Owed by Umetco (Hist. \$)	Amount Owed by Umetco (Adj. \$)
1979	1/11	2.49	44,037	409.54	1,315.82	906.28	
	2/12	2.49	61,480	571.76	1,837.01	1,265.25	
	3/12	2.57	28,272	262.93	871.91	608.98	
	4/11	2.57	60,388	561.61	1,862.38	1,300.77	
	5/10	2.57	79,662	740.86	2,456.78	1,715.92	
	7/10	2.97	95,537	888.50	3,404.94	2,516.44	
	8/14	2.97	132,248	1,229.90	4,713.31	3,483.41	
	9/12	2.97	51,341	477.48	1,829.81	1,352.33	
	10/8	2.97	131,399	1,222.01	4,683.05	3,461.04	
	11/12	2.97	100,375	933.48	3,577.35	2,643.87	
	12/10	2.97	65,091	605.35	2,319.86	1,714.51	
			849,830	7,903.42	28,872.22	20,968.80	36,307
1980	1/10	2.97	105,208	978.44	3,749.62	2,771.18	
					X 2.0%		
	2/12	2.97	56,839	873.07	3,376.23	2,503.16	
	3/11	2.97	34,076	528.17	2,024.10	1,495.93	
	4/9	2.97	92,772	1,437.94	5,510.68	4,072.74	
	6/11	2.97	79,716	1,235.60	4,735.15	3,499.55	
	7/11	3.07	107,754	1,670.18	6,616.07	4,945.89	
	8/8	3.07	96,168	1,490.60	5,904.70	4,414.10	
	9/9	3.07	115,731	1,793.83	7,105.87	5,312.04	
	10/10	3.07	122,722	1,902.97	7,535.16	5,632.19	
	11/17	3.07	91,513	1,418.45	5,618.90	4,200.45	
	12/10	3.07	39,224	607.98	2,408.37	1,800.39	
			941,723	13,937.23	54,584.85	40,647.62	64,220
1981	1/12	3.07	76,772	1,189.97	4,713.82	3,523.85	
	3/10	3.07	1,032	16.00	63.39	47.39	
	4/23	3.07	74,007	1,147.07	4,544.04	3,396.97	
	5/11	3.07	159,732	2,475.84	9,807.52	7,331.68	
	7/28	3.07	52,946	820.66	3,250.86	2,430.20	
	8/17	3.07	53,685	832.11	3,296.24	2,464.13	
	9/14	3.07	36,131	560.03	2,218.45	1,658.42	
	10/13	2.97	16,763	259.84	995.75	735.91	
	11/18	2.97	106,651	1,653.10	6,335.09	4,681.99	
	1/20/82	2.75	29,483	486.47	1,621.55	1,135.08	

U 004996

			607,202	9,441.09	36,846.71	27,405.62	39,476
1982	1/20	2.65	114,449	1,773.95	6,065.78	4,291.83	5,811
1983	2/15	1.8	31,459	487.62	1,132.54	644.92	
	3/9	2	31,864	493.89	1,274.55	780.66	
	4/12	2.3	38,972	604.07	1,792.73	1,188.66	
	5/11	2.2	44,547	690.47	1,960.05	1,269.58	
	6/10	2.17	32,507	503.86	1,410.82	906.96	
	7/13	2	30,921	479.28	1,236.85	757.57	
	8/9	2.02	19,503	302.29	787.91	485.62	
	9/13	2.02	28,468	441.25	1,150.11	708.86	
	10/13	1.92	29,919	463.74	1,148.88	685.14	
	11/16	1.9	29,623	459.15	1,125.67	666.52	
	12/15	2.02	33,341	516.79	1,346.98	830.19	
			351,124	5,442.41	14,367.09	8,924.68	11,630
1984	1/17	2.2	18,473	286.32	812.79	526.47	
	6/14	2.48	42,925	665.34	2,129.10	1,463.76	
	8/6	2.4	44,654	692.13	2,143.38	1,451.25	
	11/14	2.05	16,738	259.44	686.25	426.81	
			122,789	1,903.23	5,771.52	3,868.29	4,863
1989	10/16	3.77	44,862	695.36	3,382.61	2,687.25	
	12/14	2.4	76,433	1,984.71	3,668.78	1,684.07	
	1/29/90	2.3	81,978	1,270.67	3,771.01	2,500.34	
			203,274	3,950.74	10,822.40	6,871.66	7,367
1990	7/19	3.1	268,032	4,288.51	16,617.97	12,329.46	12,695
TOTAL			3,458,424	48,640.58	173,948.54	125,307.96	182,369

Prod. price MW 5/15/81-7/4/88 3.35-3.65

U 004997

SILVER BELL INDUSTRIES, INC. - MEMORANDUM OF PROPERTIES

SAN MIGUEL COUNTY, COLORADO, PROPERTIES

Melvin Carlson, an engineer who has been employed from time to time by both Silver Bell Mines Co. and Silver Bell Industries, Inc., was asked by Mr. Sanders to review the records of the Clerk and Recorder in San Miguel County, Colorado, for the purpose of determining the status of title to the unpatented mining claims on which Silver Bell has performed assessment work and the status of title to the patented mining claims on which Silver Bell has paid taxes. We are attaching to this memorandum on which we make explanation of the status of titles, to the extent ascertainable, two letters from Mr. Carlson dated February 23, 1978; two letters dated May 3, 1978; and one letter dated May 6, 1978. These have been numbered 1 through 5 for convenient reference.

In Letters 1 and 2, Mr. Carlson lists unpatented claims which are shown by the record to be owned by Wilson G. Clagget, Carbonero Mines and Reduction Co., and James A. Noyes and patented claims shown to be owned by Carbonero Mines & Reduction Co., Erna S. & Henry Edwin Davis, Mattie W. Pickett, and E. H. Sanders. After reviewing Letter No. 2, Mr. Sanders searched his files and found a Contract and Agreement between Silver Bell Mines Co. and George B. and Mattie (Matie) E. Pickett, a copy of which is attached hereto as EXHIBIT A. Although it purports to be a Contract and Agreement, it does contain language of conveyance; i.e., "George B. Pickett and Mattie E. Pickett hereby sell, transfer and convey all of their right, title and interest in certain mining claims to Silver Bell Mines Co., said claims being specifically described as follows. . . ." For this reason, we are forwarding the original of the document to the Clerk and Recorder in San Miguel County, Colorado, to be placed of record. Within the next few days, we will prepare a deed to the properties shown to be in Mr. Sanders' name, transferring all of them to Silver Bell Industries, Inc. Mr. Sanders has informed that he will continue to search his files to determine what conveyance information he can unearth relating to the Carbonero and Davis properties.

Letter No. 4 was accompanied by two maps, which have been reduced and colored, and are attached thereto.

Attached to Letter No. 5 is a list of properties in the name of Silver Bell Mines Co.

Silver Bell Mines Co. liquidated and dissolved following the sale of its assets to Silver Bell Industries, Inc., during the latter part of 1969.

We propose to prepare deeds transferring all the Silver Bell Mines Co. property in San Miguel County, Colorado, or elsewhere as may be required by the several memorandums of which this explanation is a part, to Silver Bell Industries, Inc., under and pursuant to the provision made for such purpose in Colorado Revised Statutes (1973) 7-26-120(2) that, after dissolution, title to any corporate property not distributed or disposed of in the dissolution shall remain in the corporation and "the majority of the surviving members of the last acting Board of Directors. . . shall have full power and authority. . . to hold, convey, and transfer such corporate property... ."

The properties being acquired by Silver Bell from F. W. Baumgartner are considered separately, even though they are listed in the List of Properties supplied by Mr. Carlson because of the necessity to understand the Purchase Agreement and the monetary requirements thereof. Also attached are copies of the four Affidavits of Labor listing claims on which labor was performed for the assessment year ended August 29, 1977. Copies of the receipts issued by the County Treasurer of San Miguel County, Colorado, for taxes paid on patented mining claims are attached hereto.

U 005320

February 23, 1978

Mr. E. H. Sanders
 President
 Silver Bell Industries, Inc.
 222 Milwaukee Street
 Denver, Colorado 80206

Re: AFFIDAVIT OF CLAIM OWNERSHIP

Dear Mr. Sanders:

I have been unable to find any record of deeds in the San Miguel County records whereby ownership of the following list of unpatented claims was transferred to Silver Bell Industries, Inc.

Original property of WILSON G. CLAGGET

<u>Name</u>	<u>Acres</u>	<u>Original</u>		<u>Amended</u>	
		<u>Book</u>	<u>Page</u>	<u>Book</u>	<u>Page</u>
Badger Boy Lode	7.55	79	482	122	105
Columbine Lode	13.11	119	401	122	191
Dayton No. 1 Lode	6.26	119	565		
Dayton No. 2 Lode	10.53	119	566		
Dewey Lode	5.36	73	428	122	107
Dewey No. 3 Lode	6.75	79	372	116	320
Gold King Lode	16.39	119	369	122	218
Gold Queen Lode	15.29	119	400	122	189
Golden Crown Extension Lode	9.33	119	401	122	190
Key Lode	1.79	119	440		
Suffolk Extension Lode	18.17	119	400	122	188
	<u>110.53</u>				

Original property of CARBONERO MINES AND REDUCTION CO.

<u>Name</u>	<u>Acres</u>	<u>Original</u>		<u>Amended</u>	
		<u>Book</u>	<u>Page</u>	<u>Book</u>	<u>Page</u>
Calmet Lode	10.33	79	173	64	291
Cascade Lode	0.00	96	101		
Farwell Lode	9.18	73	433		
Great View Lode	10.30	73	434		
Mohawk No. 1 Lode	20.21	73	434	122	187
Portland Lode	0.00	79	68	122	183
Vindicator Lode	10.33	79	245	122	184
Vindicator No. 1 Lode	10.33	79	246	122	185
Vista Lode	9.30	96	100	122	186
	<u>79.98</u>				

COPY

Page 1

U 005321

AFFIDAVIT OF CLAIM OWNERSHIP

Original property of JAMES A. NOYES

<u>Name</u>	<u>Acres</u>	<u>Original</u>		<u>Amended</u>	
		<u>Book</u>	<u>Page</u>	<u>Book</u>	<u>Page</u>
Ophir No. 17 Lode	16.07	174	381		
Ophir No. 27 Lode	20.66	174	381		
Spar No. 1 Lode	20.66	174	115		
Spar No. 2 Lode	20.66	174	115		
Spar No. 3 Lode	20.66	174	116		
Spar No. 4 Lode	19.46	174	116		
Spar No. 5 Lode	13.30	174	117		
	<u>131.47</u>				

Page 2

Sincerely yours,

Melvin Carlson, Engineer
Silver Bell Industries, Inc.

COPY

U 005322

February 23, 1978

Mr. E. H. Sanders
 President
 Silver Bell Industries, Inc.
 222 Milwaukee Street
 Denver, Colorado 80206

Re: AFFIDAVIT OF CLAIM OWNERSHIP

Dear Mr. Sanders:

I examined the assessment book in the Treasurer's office of San Miguel County on February 22, 1978 and found the following record of patented claim ownership.

CARBONERO MINES & REDUCTION CO.
 c/o SILVER BELL MINES CO.
 222 Milwaukee
 Denver, Colo. 80206

<u>M.S. Number</u>	<u>Name</u>	<u>Acres</u>
16906	Boston Belle Lode	
16906	Carbon Lode	
16906	Carbonado Lode	
16906	Carbonero Lode	36.146
19815	East Panama Lode	
19815	West Panama Lode	31.865
20327	Full Moon Lode	17.128
1436	Mohawk Lode	10.330
16905	North Star Lode	10.331
20302	North Star Mill Site	4.995
		<u>110.795</u>

DAVIS, ERNA S. & HENRY EDWIN
 c/o SILVER BELL MINES CO.
 222 Milwaukee
 Denver, Colo. 80206

<u>M.S. Number</u>	<u>Name</u>	<u>Acres</u>
16654	Attica Lode (Undivided $\frac{1}{2}$)	2.314 (Assessed)

COPY
 Page 1

U 005323

AFFIDAVIT OF CLAIM OWNERSHIP

PICKETT, MATTIE W.
c/o E. H. SANDERS
1730 East 17th Avenue
Denver, Colo. 80218

<u>M.S.</u> <u>Number</u>	<u>Name</u>	<u>Acres</u>
2630	Gold Eagle Lode	10.280
5007	Valley View Lode	9.219
7270	Yellow Boy Lode	
7270	Yellow Girl Lode	10.590
9029	Hidden Treasure Lode	7.091
7549	St. Louis Lode (Undivided $\frac{1}{2}$)	2.2425 (Assessed)
7564	Tidal Wave Lode	10.170
		<u>49.5925</u>

SANDERS, E. H.
c/o SILVER BELL MINES CO.
222 Milwaukee
Denver, Colo. 80206

<u>M.S.</u> <u>Number</u>	<u>Name</u>	<u>Acres</u>
1224	Capitan Lode	4.750
686	Carribeau Lode	9.970
18500	Celt Lode	
18500	Delta Lode	
18500	Florence Lode	
18500	McCarthy Lode	
18500	O.K. Lode	
18500	Schenectady Lode	
18500	Security Lode	58.057
1223	Colorado Lode	10.330
347A	Montezuma Lode	10.300
14168	Harvest Moon Lode	
14168	Mountain Queen Lode	17.250
347B	Montezuma Mill Site	5.000
		<u>115.657</u>

Page 2

Sincerely yours,

Melvin Carlson, Engineer
Silver Bell Industries, Inc.

COPY

U 005324

SILVER BELL INDUSTRIES, INC.

REC'D MAY 8 1978

MINING PROPERTY AT
OPHIR, COLORADO 81426
PHONE 728-3724

May 3, 1978

Mr. E. H. Sanders
President
Silver Bell Industries, Inc.
158 Fillmore Street, Suite 309
Denver, Colorado 80206

Re: Property in the name of E. H. Sanders

Dear Mr. Sanders:

The following mining property is held in your name. This list was obtained from records in the Treasurer's office of San Miguel County.

PATENTED MINING PROPERTY

Capitan Lode, M.S. No. 1224
Carribeau Lode, M.S. No. 686
Celt, Delta, Florence, McCarthy, O.K.,
Schenectady, and Security Lodes, M.S. No. 18500
Colorado Lode, M.S. No. 1223
Montezuma Lode, M.S. No. 347A
Montezuma Mill Site, M.S. No. 347B
Harvest Moon and Mountain Queen Lodes, M.S. No. 14168

Ownership of the above 14 claims is evidenced by two quit claim deeds that are recorded in the records of San Miguel County, Colorado. The area of this group is 115.657 acres.

Book 204 Page 326 Quit Claim Deed Date: May 29, 1947
Grantee: E. H. Sanders
Grantor: Ralph D. Morgan, Director Carribeau Mining Co.--on my own
behalf and in behalf of Carribeau Mining Co.

Book 204 Page 352 Quit Claim Deed Date: July 3, 1947
Grantee: E. H. Sanders
Grantor: Harriet Semler, Director Carribeau Mining Co.--on my own
behalf and in behalf of Carribeau Mining Co.

In addition to the 14 patented claims, the property described in the two quit claim deeds include two parcels of the Sarah Placer, Mineral Survey 10417, and Mill, Pipeline & Flume on Sarah Placer, and 7/100 acre in Town of Ophir for Headgate, and lots 8-9-10, Block 15, Town of Ophir.

The two parcels of the Sarah Placer and the parcel and lots in the Town of Ophir went to Donald Koll.

-1-

U 005325

The following patented mining property is listed as follows:

PICKETT, MATTIE W.
c/o E. H. SANDERS

Gold Eagle Lode, M.S. No. 2630
Valley View Lode, M.S. No. 5007
Yellow Boy and Yellow Girl Lodes, M.S. No. 7270
Hidden Treasure Lode, M.S. No. 9029
St. Louis Lode, Undivided $\frac{1}{4}$, M.S. No. 7549
Tidal Wave Lode, M.S. No. 7564

The area of these 7 claims is 49.5925 acres.

UNPATENTED MINING PROPERTY

The following three mining claims were located by us in the name of E. H. Sanders:

Dayton No. 6 Lode Book 175, Page 91

Dayton No. 7 Lode Book 175, Page 92

Silver Bell Mill Site	Book 204, Page 95	Original Location
	Book 204, Page 97	Amended Location
	Book 204, Page 201	Amended Location

in error in name of Silver Bell Mines Co.

Very truly yours,

Melvin Carlson
Melvin Carlson, Engineer
Silver Bell Industries, Inc.

SILVER BELL INDUSTRIES, INC.

MINING PROPERTY AT
OPHIR, COLORADO 81426
PHONE 728-3724
May 3, 1978

LETTER NO. 4

Mr. E. H. Sanders
President
Silver Bell Industries, Inc.
158 Fillmore Street, Suite 309
Denver, Colorado 80206

Dear Mr. Sanders:

Our mining property at Ophir, Colorado consists of 47 patented claims with an assessed acreage of 407.690 acres and 299 unpatented claims with an area of 2946 acres.

The enclosed maps have 345 of these claims shown in color. The Sanders Tunnel Site, which begins on the Carbonero mill site, is not shown on the maps.

Also enclosed are a letter on the property in the name of E. H. Sanders, a copy of the claim list that I prepared June 1, 1977, and copies of the two letters listing claims for which we have no recorded deeds of ownership.

I searched the "S" listing of the Index to Mines from August 1967 to the present and found no record of the transfer of assets from Silver Bell Mines Co. to Silver Bell Industries, Inc.

The Index to Articles of Incorporation under "S" have two entries for Silver Bell Mines Co.

1944--Certificate of Incorporation, File # 13

1947--Certificate of Amendment to Certificate of Incorporation, File # 13

Very truly yours,

Melvin Carlson
Melvin Carlson, Engineer
Silver Bell Industries, Inc.

U 005327

RON SPRINGS MINING DISTRICT
SAN MIGUEL COUNTY, COLORADO
SCALE 1 inch = 10 chains
JUNE 15, 1977

SEC. 29

SEC. 32

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

1/1

100

SEC. 34

[illegible]

100

SEC. 2

U 005328

THE AREA EAST OF OPHIR

SILVER BELL INDUSTRIES, INC.

MIN. SPRINGS MINING DISTRICT,
SOUTH HIGGINS COUNTY, COLORADO

SCALE: 1 inch = 10 chains

DECEMBER 1, 1973

REVISED: APRIL 2, 1975

REVISED: JUNE 15, 1977

CLAIM OWNERSHIP

- ☐ BELIGLE, RANDOLPH
- ☐ BISHOP, MELVIN G.
- ☐ DINAN, MARGARET & ELAINE
- ☐ FERGANCHICK, TONY
- ☐ KULL, DONALD M.
- ☐ PENTICO, M.A.
- ☐ RAINBOW MINING & EXPLORATION CO.
- ☐ REED, JAMES STANLEY
- ☐ ROBINSON, THERESA
- ☐ SILVER BELL INDUSTRIES, INC.
- ☐ SILVER HAT MINING, INC.
- ☐ SILVER MOUNTAIN MINING CO.
- ☐ WARNER, WMS. GEORGE G.
- ☐ WILLIAMS, C.K. & CO.

U 005329

SILVER BELL INDUSTRIES, INC.

MINING PROPERTY AT
OPHIR, COLORADO 81426
PHONE 728-3724
May 6, 1978

REC'D MAY 8 1978

Mr. E. H. Sanders
President
Silver Bell Industries, Inc.
158 Fillmore Street, Suite 309
Denver, Colorado 80206

Dear Mr. Sanders:

Enclosed is a list of the mining property in the name of Silver Bell Mines Co. The list contains 7-15/16 patented claims with 60.989 acres and 95 unpatented claims with 807.14 acres.

My previous letter to you concerning property in your name was in error in listing the Silver Bell Mill Site.

Sincerely yours,

Melvin Carlson, Engineer
Silver Bell Industries, Inc.

U 005330

May 5, 1978

MINING PROPERTY IN THE NAME OF SILVER BELL MINES CO.

PATENTED CLAIMS Total Number 7 15/16 Total Acres 60.989

Deed from Monarch Mines, Inc. B 308 P 359

M.S.

<u>Number</u>	<u>Name</u>	<u>Acres</u>
5735	Broadway Lode	4.020
6979	Montana Lode	8.610
1009	Rockislander Lode	<u>7.580</u>
3 Claims		20.210

Deed from S. J. Oberto B 216 P 281

5978	Bonita Lode	9.700
5978	Little Eva Lode	9.700
4611	El Mundo Lode	3.819
4576	Mon Bijou Lode	7.690
4575	Single Standard Lode (Undivided 15/16)	<u>9.870</u>
4 15/16 Claims		40.779

UNPATENTED CLAIMS

Claims located by Silver Bell Mines Co.

<u>Name</u>	<u>Acres</u>	<u>Original</u>		<u>Amended</u>	
		<u>Book</u>	<u>Page</u>	<u>Book</u>	<u>Page</u>
Aurum Lode	20.66	225	666		
Butler Mill Site	5.00	204	468		
Carbonero Mill Site	3.57	216	65		
Connection Lode	11.32	261	415		
J. G. Lode	5.46	216	112		
Panama Mill Site	4.98	216	64		
Plumbum Lode	9.12	175	188		
Sanders Tunnel Site	0.00	216	65		
Xenolith No. 1 Lode	6.54	204	560		
Xenolith No. 2 Lode	11.32	204	560		
Xenolith No. 3 Lode	9.53	204	560		
Xenolith No. 4 Lode	3.71	204	561		
Xenolith No. 5 Lode	<u>4.81</u>	204	561		
13 Claims	96.02				

May 5, 1978

MINING PROPERTY IN THE NAME OF SILVER BELL MINES CO.

UNPATENTED CLAIMS

Deed from Monarch Mines, Inc.		B 308 Page 360			
Name	Acres	Original		Amended	
		Book	Page	Book	Page
Cascade Lode	20.66	119	441	122	210
Cinnabar Lode	18.66	119	487	122	206
Dewey Lode	1.25	61	385	88	139
Final Placer No. 1	25.00	176	184		
Fulton County Lode	4.07	119	479		
Fraction Lode	0.00	119	422		
Glade Lode	18.67	119	445	122	209
Gold Ore Lode	1.19	119	279	122	205
Horrible Lode	9.33	119	329	122	202
Humdinger Lode	20.66	119	330	122	212
Humdinger No. 1 Lode	10.33	119	330	122	201
Jerry Lode	11.40	119	490	122	211
Lake Fork Lode	15.91	119	480	122	208
Milwaukee Lode	11.42	119	462	122	204
Paymaster Lode	12.08	119	482	122	199
Silver Bell No. 11 Lode	3.08	79	232		
Silver Bell No. 12 Lode	4.17	79	232		
Silver Bell No. 13 Lode	2.48	79	233		
Silver Bell No. 16 Lode	10.23	79	238		
Silver Bell No. 17 Lode	9.93	79	238		
Silver Bell No. 18 Lode	9.04	79	414		
Silver Bell No. 19 Lode	9.93	79	239		
Silver Bell No. 20 Lode	4.07	79	240		
Silver Bell No. 22 Lode	6.70	79	414		
Silver Button Lode	18.37	119	278		
Silver Crown Lode	13.11	119	278		
Wedge Lode	7.31	119	501		
Zuma Lode	14.90	119	402	122	200
28 Claims	293.85				

Deed from Eugene Henry Sanders, Eber George Greif, and Eugene Joseph Nord Book 115 Page 359

Silver Bell Mill Site	1.09	204	95	204	201
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May 5, 1978

MINING PROPERTY IN THE NAME OF SILVER BELL MINES CO.

UNPATENTED CLAIMS

Deed from Butterfly Consolidated Mines, Inc., Bankrupt B 204 P 133

Quit Claim Deed from C. J. Cebell, et. al., and J. M. Belisle
(Same list of claims contained in both deeds) B 200 P 283

Name	Acres	Original	
		Book	Page
Cebell Lode	16.65	119	458
Denver Lode	6.64	79	509
Enterprise Lode	10.33	79	382
Edgar Lode	7.75	79	285
Fraction Lode	1.71	79	580
Georgiana Lode	8.10	79	510
Gold Coin Lode	7.95	79	378
Gold Coin No. 2 Lode	5.51	79	378
G.W.G. No. 1 Lode	11.71	79	284
G.W.G. No. 2 Lode	5.95	79	284
G.W.G. No. 3 Lode	9.78	79	302
G.W.G. No. 5 Lode (note 1)	8.17	79	285
G.W.G. No. 5 Lode	8.13	79	325
G.W.G. No. 6 Lode	6.06	79	327
G.W.G. No. 7 Lode	8.33	79	338
G.W.G. No. 10 Lode	7.19	79	297
G.W.G. No. 11 Lode	9.72	79	347
G.W.G. No. 13 Lode	7.14	79	349
G.W.G. No. 14 Lode	0.99	79	350
G.W.G. No. 15 Lode	7.94	79	347
Iron King Lode	7.85	73	60
Lake View Lode	10.33	79	298
Lake View No. 2 Lode	8.83	79	298
Lake View No. 3 Lode	4.74	79	379
Lightning Lode	2.15	79	318
Mary Jane Lode	4.67	79	286
North Star Lode	2.33	79	556
Quail Lode	8.61	79	211
Rising Sun Lode	5.95	79	299
Silver Bell No. 1 Lode	9.01	79	228
Silver Bell No. 2 Lode	5.18	79	228
Silver Bell No. 3 Lode	6.89	79	229
Silver Bell No. 4 Lode	9.16	79	229
Silver Bell No. 5 Lode	8.72	79	230
Silver Bell No. 7 Lode	3.57	79	227
Silver Bell No. 8 Lode	4.23	79	227
Silver Bell No. 9 Lode	8.50	79	231
Silver Bell No. 10 Lode	5.07	79	231
Silver Bell No. 21 Lode	5.46	79	291
Sulphide Lode	10.33	73	602
Sunset Lode	10.33	79	299
Victor No. 2 Lode	7.99	79	579

42 Claims 305.65

May 5, 1978

MINING PROPERTY IN THE NAME OF SILVER BELL MINES CO.

UNPATENTED CLAIMS

Contract of Sale from Wilson G. Clagett B 290 P 235

Quit Claim Deed from Clyde Deremo B 309 P 248
(Same list of unpatented claims contained in both records)

<u>Name</u>	<u>Acres</u>	<u>Original</u>		<u>Amended</u>	
		<u>Book</u>	<u>Page</u>	<u>Book</u>	<u>Page</u>
Badger Boy Lode	7.55	79	482	122	105
Columbine Lode	13.11	119	401	122	191
Dayton No. 1 Lode	6.26	119	565		
Dayton No. 2 Lode	10.53	119	566		
Dewey Lode (note 2)	5.36	73	428	122	107
Dewey No. 3 Lode	6.75	79	372	116	320
Gold King Lode	16.39	119	369	122	248
Gold Queen Lode	15.29	119	400	122	189
Golden Crown Extension Lode (note 2)	9.33	119	401	122	190
Key Lode	1.79	119	440		
Suffolk Extension Lode	<u>18.17</u>	119	400	122	188
11 Claims	110.53				

Quit Claim Deed from Charles N. Fairlamb B 309 P 149

An undivided 3% interest in and to all mine, mill, mint, or smelter returns from ores produced from the Creve Coeur Lode, Mineral Survey No. 12373, located in the Iron Springs Mining District.

NOTES

- 1----The name of the claim on the deeds is G.W.G. No. 4, but I have found no record of a claim by that name. A second G.W.G. No. 5 is recorded.
- 2----The names of the claims on the records are Dewey No. 1 Lode and Gold Crown Extension, but I have found no record of such claims.

May 5, 1978

MINING PROPERTY IN THE NAME OF SILVER BELL MINES CO.

WATER RIGHTS

<u>District</u> <u>Priority</u> <u>Number</u>	<u>Name</u>	<u>Volume</u>
188	Silver Bell Flume & Pipeline No. 1	3.03 CFS
207	Silver Bell Lower Cross Cut Tunnel	7.84 CFS
174	Silver Bell Flume & Pipeline No. 3	8.50 CFS

CONTRACT AND AGREEMENT

BETWEEN

SILVER BELL MINES CO.

And

GEORGE B. PICKETT and
MATTIE E. PICKETT

WHEREAS, GEORGE B. PICKETT and his wife, MATTIE E. PICKETT, are the owners and have full right and title to certain mining claims, and

WHEREAS, SILVER BELL MINES CO. desires to purchase said mining claims,

NOW, THEREFORE, in consideration of the promises herein made,

IT IS AGREED that:

George B. Pickett and Mattie E. Pickett hereby sell, transfer and convey all their right, title and interest in certain mining claims to Silver Bell Mines Co., said claims being specifically described as follows:

1. Gold Eagle Lode, #2360.
2. Valley View Lode, #5007.
3. Yellow Boy Lode, #7270.
4. Yellow Girl Lode, #7270.
5. Hidden Treasure Lode, #9029.
6. Undivided 1/4 interest in St. Louis Lode, #7549.
7. Tidal Wave Lode, #7564.
8. Lots 11 and 12 - Block M - Ophir.
9. And any and all claims, unpatented or otherwise, that George B. Pickett and Mattie E. Pickett might otherwise have in the region encompassed by the present and future mining operations of Silver Bell Mines Co. and

Silver Bell Mines Co. agrees to issue to George B. Pickett Eighteen Thousand Five Hundred (18,500) shares of common stock

U 005336

of Silver Bell Mines Co., and

Mattie E. Pickett agrees to the transfer as herein described and agrees to make this transfer as an inducement to Silver Bell Mines Co. to issue the stock above described to her husband, George B. Pickett.

Dated at Pearsall, Texas this 5 day of Feb., 1952.

SILVER BELL MINES CO.

By E. H. Sanders
E. H. Sanders, President

Attest:

E. G. O'Brien
E. G. O'Brien, Secretary

(CORPORATE SEAL)

In the Presence of;

George B. Pickett L. S.
George B. Pickett

Mattie E. Pickett L. S.
Mattie E. Pickett

STATE OF TEXAS }
COUNTY OF } SS

Personally appeared before me this 5 day of February A. D., 1952, the above named George B. Pickett and Mattie E. Pickett, to me known to be the persons who executed the above and foregoing instrument and acknowledged the same.

(Seal)

Notary Public, Texas

My commission expires, June 1, 1954

U 005337

263153

PAID \$ 5.50

Filed for record: August 29, 1977. Tim : 11:20 A.M. and duly recorded in Book-
367 Page 342.

Gay Cappis-Recorder
by *Kathleen G. ...* Deputy

AFFIDAVIT OF VALUE OF LABOR AND IMPROVEMENTS

STATE OF COLORADO)
) ss
COUNTY OF SAN MIGUEL)

BEFORE ME, the subscriber, personally appeared EUGENE H. SANDERS, who being duly sworn, states that SILVER BELL INDUSTRIES, INC. is presently in possession and performing labor and improvements for annual assessment work on the following described unpatented lode mining claims, the names of which, together with the book and page of recording of the location certificates thereof, are as follows:

<u>CLAIMS</u>	<u>BOOK</u>	<u>PAGE</u>
Badger Boy Lode Am.	122	105
Columbine Lode Am.	122	191
Dayton No. 1 Lode	119	565
Dayton No. 2 Lode	119	566
Dewey Lode Am.	122	107
Dewey No. 2 Lode Am.	122	106
Dewey No. 3 Lode Am.	116	320
Gold King Lode Am.	122	248
Gold Queen Lode Am.	122	189
Golden Crown Extension Lode Am.	122	190
Key Lode	119	440
Suffolk Extension Lode Am.	122	188
Connection Lode	261	415
Dayton No. 6 Lode	175	91
Dayton No. 7 Lode	175	92

All of the foregoing unpatented mining claims are situated in San Miguel County, Colorado, State of Colorado. At least \$100 worth of work or improvements have been heretofore performed or will be performed by Silver Bell Industries, Inc. on said claims which is being done with reasonable diligence and continuity.

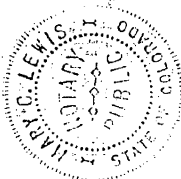
All of such expenditures have been, are being and will be made at the expense of Silver Bell Industries, Inc., the owners of the above claims, for the year ending September 1, 1977 and for the purpose of holding said claims under the mining laws of the State of Colorado and of the United States of America. The said expenditures were made commencing on September 1, 1976 and continuing until the full amount of such expenditures have been made.

SILVER BELL INDUSTRIES, INC.

Eugene H. Sanders
Eugene H. Sanders
President

Subscribed and sworn to before me this 26th day of August, 1977.

My Commission expires January 16, 1980.



Mary O. Lewis
Notary Public

U 005338

PAID \$ 14.25

203150

State of Colorado)
County of San Miguel) ssFiled for record: August 29, 1977. Time: 11:00
a.m. and duly recorded in Book 367 Page 32
337.by *Hetham* Deputy
Gay Capps-RecorderAFFIDAVIT OF VALUE OF LABOR AND IMPROVEMENTSSTATE OF COLORADO)
) ss
COUNTY OF SAN MIGUEL)

BEFORE ME, the subscriber, personally appeared, EUGENE H. SANDERS, who being duly sworn, states that SILVER BELL INDUSTRIES, INC. is presently in possession and performing labor and improvements for annual assessment work on the following described unpatented lode mining claims, the names of which, together with the book and page of recording of the location certificates thereof, are as follows:

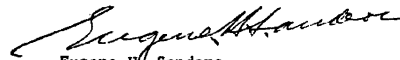
<u>CLAIM</u>	<u>BOOK</u>	<u>PAGE</u>
Denver Lode	79	509
Enterprise Lode	79	382
Edgar Lode	79	285
Fraction Lode	79	580
Georiana Lode	79	510
Gold Coin Lode	79	378
Gold Coin No. 2 Lode	79	378
G.W.G. No. 1 Lode	79	284
G.W.G. No. 2 Lode	79	284
G.W.G. No. 3 Lode	79	302
G.W.G. No. 4 Lode	79	325
G.W.G. No. 5 Lode	79	285
G.W.G. No. 6 Lode	79	327
G.W.G. No. 7 Lode	79	338
G.W.G. No. 10 Lode	79	297
G.W.G. No. 11 Lode	79	347
G.W.G. No. 13 Lode	79	349
G.W.G. No. 14 Lode	79	350
G.W.G. No. 15 Lode	79	347
Iron King Lode	73	60
Lake View Lode	79	298
Lake View No. 2 Lode	79	298
Lake View No. 3 Lode	79	379
Mary Jane Lode	79	286
Rising Sun Lode	79	299
Sunset Lode	79	299
Victor No. 2 Lode	79	579
Fulton County Lode	119	479
Fraction Lode	119	422
Gold Ore Lode Am,	122	205
Silver Button Lode	119	278
Silver Crown Lode	119	278
Xenolith No. 1 Lode	204	560
Xenolith No. 2 Lode	204	560
Xenolith No. 3 Lode	204	560
Xenolith No. 4 Lode	204	561
Xenolith No. 5 Lode	204	561
Spar No. 1 Lode	174	115
Spar No. 2 Lode	174	115
Spar No. 3 Lode	174	116
Spar No. 4 Lode	174	116
Spar No. 5 Lode	174	117

All of the foregoing unpatented mining claims are situated in San Miguel County, Colorado, State of Colorado. At least \$100 worth of work or improvements have been heretofore performed or will be performed by Silver Bell Industries, Inc. on said claims which is being done with reasonable diligence and continuity.

U 005339

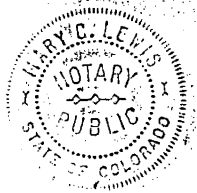
All of such expenditures have been, are being and will be made at the expense of Silver Bell Industries, Inc., the owners of the above claims, for the year ending September 1, 1977 and for the purpose of holding said claims under the mining laws of the State of Colorado and of the United States of America. The said expenditures were made commencing on September 1, 1976 and continuing until the full amount of such expenditures have been made.

SILVER BELL INDUSTRIES, INC.


Eugene H. Sanders
President

Subscribed and sworn to before me this 26th day of August, 1977.

My Commission expires January 16, 1980.




Notary Public

U 005340

Filed for record: August 29, 1977. Time: 11:15 A.M. and duly recorded
in Book 367 Page 340-341.

203152

PAID \$ 14.00

Gay Cappis-Recorder
by *Katharine B. Rice* Deputy

AFFIDAVIT OF VALUE OF LABOR AND IMPROVEMENTS

STATE OF COLORADO)
)
)
COUNTY OF SAN MIGUEL)

ss

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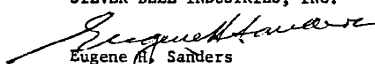
<u>CLAIM</u>	<u>BOOK</u>	<u>PAGE</u>
Gebell Lode	119	458
Lightning Lode	79	318
✓ North Star Lode	79	556
Quail Lode	79	211
Silver Bell No. 1 Lode	79	228
Silver Bell No. 2 Lode	79	228
Silver Bell No. 3 Lode	79	229
Silver Bell No. 4 Lode	79	229
Silver Bell No. 5 Lode	79	230
Silver Bell No. 7 Lode	79	227
Silver Bell No. 8 Lode	79	227
Silver Bell No. 9 Lode	79	231
Silver Bell No. 10 Lode	79	231
Silver Bell No. 21 Lode	79	291
Sulphide Lode	79	602
Cascade Lode Am.	122	210
Cinnabar Lode Am.	122	206
Dewey Lode Am.	88	139
Final Placer No. 1	176	184
Glade Lode Am.	122	209
Horrible Lode Am.	122	202
Humdinger Lode Am.	122	212
Humdinger No. 1 Lode Am.	122	201
Jerry Lode Am.	122	211
Lake Fork Lode Am.	122	208
Milwaukee Lode Am.	122	204
Paymaster Lode Am.	122	199
Silver Bell No. 11 Lode	79	232
Silver Bell No. 12 Lode	79	232
Silver Bell No. 13 Lode	79	233
Silver Bell No. 16 Lode	79	238
Silver Bell No. 17 Lode	79	238
Silver Bell No. 18 Lode	79	414
Silver Bell No. 19 Lode	79	239
Silver Bell No. 20 Lode	79	240
Silver Bell No. 22 Lode	79	414
Wedge Lode	119	501
Zuma Lode Am.	122	200
Butler Mill Site	204	468
Silver Bell Mill Site Am.	204	201

All of the foregoing unpatented mining claims are situated in San Miguel County, Colorado, State of Colorado. At least \$100 worth of work or improvements have been heretofore performed or will be performed by Silver Bell Industries, Inc. on said claims which is being done with reasonable diligence and continuity.

U 005341

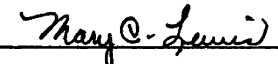
All of such expenditures have been, are being and will be made at the expense of Silver Bell Industries, Inc., the owners of the above claims, for the year ending September 1, 1977 and for the purpose of holding said claims under the mining laws of the State of Colorado and of the United States of America. The said expenditures were made commencing on September 1, 1976 and continuing until the full amount of such expenditures have been made.

SILVER BELL INDUSTRIES, INC.


Eugene M. Sanders
President

Subscribed and sworn to before me this 26th day of August, 1977.

My Commission expires January 16, 1980.


Notary Public



U 005342

203151

PAID \$ 50.25

Gay Cappis-Recorder
by *William E. Smith* Deputy

AFFIDAVIT OF VALUE OF LABOR AND IMPROVEMENTS

STATE OF COLORADO)
) ss
COUNTY OF SAN MIGUEL)

BEFORE ME, the subscriber, personally appeared EUGENE H. SANDERS, who being duly sworn, states that SILVER BELL INDUSTRIES, INC. is presently in possession and performing labor and improvements for annual assessment work on the following described unpatented lode mining claims, the names of which, together with the book and page of recording of the location certificates thereof, are as follows:

<u>CLAIM</u>	<u>BOOK</u>	<u>PAGE</u>
Calmet Lode Am.	64	291
Cascade Lode	96	101
Farwell Lode	73	433
Greatview Lode	73	434
Mohawk No. 1 Lode Am.	122	187
Portland Lode Am.	122	183
Vindicator Lode Am.	122	184
Vindicator No. 1 Lode Am.	122	185
Vista Lode Am.	122	186
Tip Top No. 5 Lode	64	455
Tip Top No. 6 Lode	64	457
Tip Top No. 9 Lode	119	457
Aurum Lode	225	666
Carbonero Mill Site	216	65
J. G. Lode	216	112
Panama Mill Site	216	64
Plumbum Lode	175	188
Sanders Tunnel Site	216	65
Silver Bell No. 101 Lode	348	152/159
Silver Bell No. 102 Lode	348	153/159
Silver Bell No. 103 Lode	348	154/159
Silver Bell No. 104 Lode	348	155/159
Silver Bell No. 105 Lode	348	156/159
Silver Bell No. 106 Lode	348	157/159
Silver Bell No. 107 Lode	348	158/159
Silver Bell No. 108 Lode Am.	350	803
Silver Bell No. 109 Lode Am.	350	804
Silver Bell No. 110 Lode Am.	350	805
Silver Bell No. 111 Lode Am.	362	460
Silver Bell No. 112 Lode Am.	350	807
Silver Bell No. 113 Lode Am.	350	808
Ophir No. 17 Lode	174	381
Ophir No. 27 Lode	174	381
Chapman G. Lodes Nos. 1 thru 27 Am.	335	361-374
Relocated No. 11 Lode	338	196
Relocated No. 24 Lode	338	196
Ruth Lodes Nos. 1 thru 27 Am.	336	899-125
Ruth Lodes Nos. 28 thru 33 Am.	336	926-931
Ruth Lodes Nos. 35 thru 38 Am.	336	932-935
Ophir Lodes Nos. 1 thru 74 Am.	338	105-178
Ophir Lodes Nos. 93 thru 106 Am.	338	179-192
Ophir Lodes Nos. 107 thru 109 Am.	338	193-195
Arrow Head Lode	119	607
Gold Queen Lode	119	607
Little Chief Lode	119	608
Silver Prince Lode	119	608
Yellow Jacket Lode	119	606
Black Dragon Lode Am.	319	490
Black Jack Lode Am.	319	489

U 005343

<u>CLAIM</u>	<u>BOOK</u>	<u>PAGE</u>
Frank B. Lode Am.	122	407
Frank B. Mill Site	204	347
Defense Lode Am.	319	487
Dorothy B. Lode Am.	319	488
Slide Lode Am.	319	485
Vera Lode Am.	319	486

All of the foregoing unpatented mining claims are situated in San Miguel County, Colorado, State of Colorado. At least \$100 worth of work or improvements have been heretofore performed or will be performed by Silver Bell Industries, Inc. on said claims which is being done with reasonable diligence and continuity.

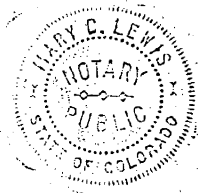
All of such expenditures have been, are being and will be made at the expense of Silver Bell Industries, Inc., the owners of the above claims, for the year ending September 1, 1977 and for the purpose of holding said claims under the mining laws of the State of Colorado and of the United States of America. The said expenditures were made commencing on September 1, 1976 and continuing until the full amount of such expenditures have been made.

SILVER BELL INDUSTRIES, INC.

Eugene H. Sanders
Eugene H. Sanders
President

Subscribed and sworn to before me this 26th day of August, 1977.

My Commission expires January 16, 1980.



Mary C. Lewis
Notary Public

U 005344

October 17, 1980

United States Bureau of Mines
Department of the Interior
Building 20, Federal Center
Denver, Colorado 80225

Gentlemen:

I, Molycorp, Inc., am the owner of the
see attached mines
consisting of the see attached

_____ mining claims situated in the _____
Iron Springs _____ mining district, San Miguel

County, State of Colorado and hereby request that the Bureau of Mines provide Allan F. Divis with such past production data at the above described mines and/or mining claims as are contained in your files.

Molycorp, Inc.

By H. M. Rainey
Address: P. O. Box 54945

Los Angeles, CA 90054

U 011017

Carbonero Mine

Carbon)
Carbonero) MS 16906
Carbonado)
Boston Belle)
East Panama) MS 19815
West Panama)
Mohawk MS 1436
Norht Star MS 16905

Little Eva Mine

Little Eva MS 5978
Single Standard MS 4575
El Mundo MS 4611
Mon Bijou MS 4576
Bonita MS 5978

Attica Mine

Attica MS 16654

Carribeau MS 686
Montezuma MS 347A

U 011018

WARRANTY DEED

*This is what was
finally signed
OK
12/31/74*

THIS DEED, made this 31st day of December, 1974,
between SILVER BELL INDUSTRIES, INC. of the City and
County of Denver and State of Colorado, of the first
part, and F. W. BAUMGARTNER, of the City and County of
Denver, and State of Colorado, of the second part:

W I T N E S S E T H :

That the said party of the first part, for and
in consideration of the sum of Ten Dollars (\$10.00)
to the said party of the first part in hand paid by
the said party of the second part, the receipt whereof
is hereby confessed and acknowledged, has granted,
bargained, sold and conveyed, and by these presents
does grant, bargain, sell, convey and confirm, unto
the said party of the second part, his heirs and assigns
forever, all of the following described land or claims,
situate, lying and being in the County of San Miguel
and State of Colorado, to-wit:

The following patented mining claims: Gold Corner,
Gold Lilly, Gold Lilly Extension, Gold Rose, Gold Rose
Extension, Gold Butte, Gold Butte Extension, Gold Cliff,
Gold Cligg Extension, Gold Corridor, Gold Corridor Ex-
tension, Gold Crescent, Gold Crescent Extension, Gold
Coin, Gold Coin Extension, Survey No. 7777, more particu-
larly described as follows: Beginning at the south
quarter corner, Section 35, Township 42 North, Range
9 West of the New Mexico Principal Meridian, thence north
17° 59' 47" east 5,245.5 feet to the true point of be-
ginning which is also the southwest corner of the Gold
Corner Claim; thence north 3° east 1,500 feet to a point
which is the northwest corner of the Gold Corner Claim;
thence south 87° east 2,400 feet to a point which is the
northeast corner of the Gold Coin Extension Claim which
bears south 46° 09.6' east 1,169.62 feet from a reference
point evidenced by a 5/8ths inch rebar on the Carbonero
Mine Dump; thence south 3° west 1,500 feet to a point
which is the southeast corner of the Gold Coin Extension
Claim and the northeast corner of the Gold Coin Claim
which bears north 39° 33' 40" east 6,308 feet from the
south quarter corner of Section 35; thence south 3° west
1,500 feet to a point which is the southeast corner of
the Gold Coin Claim; thence north 87° west 2,100 feet to
a point which is the southwest corner of the Gold Lilly
Claim which bears north 70° 23.9' east 92.47 feet from a
reference point (evidenced by a 5/8ths inch rebar on the
west side of an old road); thence north 3° east 1,500 feet
to a point which is the northwest corner of the Gold Lilly
Claim, the southwest corner of the Gold Lilly Extension
Claim and the southeast corner of the Gold Corner Claim;
thence north 87° west 300 feet to the true point of be-
ginning and containing all of the fifteen patented mining
claims above-described.

EXCEPTING AND RESERVING, however, to the party of the first
part, its heirs and assigns, all the oil, gas and other
minerals (except all sand, gravel, stone, clay and similar
substances which shall be owned by the party of the second
part) under the said mining claims; and subject to appli-
cable federal and state laws, rules and regulations, the
party of the first part shall have the right and privilege
of mining and removing the oil, gas and other minerals
reserved by it by any subterranean process; provided that

U 011119

the party of the first part, its heirs and assigns, shall not use the surface of said mining claims for exploration or development or for any other purpose, except that the party of the first part, its heirs and assigns, may drill exploratory core holes on said mining claims at locations not closer than 100 feet from any structure erected thereon by the party of the second part and in the event such core holes are drilled the party of the first part (a) shall first confer with the party of the second part as to the location thereof and the intended route of access, (b) shall pay all damages caused to the surface of the land by reason thereof and (c) shall restore the surface to approximately the same condition as it existed prior to the drilling of said core holes. The party of the first part shall have the right and privilege of making and driving tunnels, passages and ways under the said surface for the purpose of mining any minerals now or hereafter owned or held by the party of the first part, its heirs or assigns, on said mining claims; provided further that the party of the first part, its heirs and assigns, shall always provide subjacent and lateral support for the surface of said mining claims and shall not cause any injury to the said surface or to any buildings or improvements of any kind now or hereafter erected or made thereon by reason of the mining and removal of said minerals or any adjoining minerals, or from any failure of subjacent or lateral support, or by reason of driving said tunnels, passages and ways, or by reason of anything that may occur in connection with the mining of said minerals or in consequence thereof.

TOGETHER with all and singular the hereditaments and appurtenances thereto belonging, or in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever of the said party of the first part, either in law or equity, of, in and to the above-bargained premises, with the hereditaments and appurtenances.

TO HAVE AND TO HOLD the said premises above-bargained and described, with the appurtenances, unto the said party of the second part, his heirs and assigns forever. And the said party of the first part, for itself, its heirs, executors, and administrators, does covenant, grant, bargain and agree to and with the said party of the second part, his heirs and assigns, that at the time of the ensembling and delivery of these presents it is well seized of the premises above-conveyed, as of good, sure, perfect, absolute and indefeasible estate of inheritance, in law, in fee simple, and has good right, full power and lawful authority to grant, bargain, sell and convey the same in manner and form as aforesaid, and that the same are free and clear from all former and other grants, bargains, sales, liens, taxes, assessments and encumbrances of whatever kind or nature soever, except the taxes for 1973, payable in 1974, and subsequent taxes; and the above-bargained premises in the quiet and peaceable possession of the said party of the second part, his heirs and assigns against all and every person or persons lawfully claiming or to claim the whole or any part thereof, the said party of the first part shall and will WARRANT AND FOREVER DEFEND.

IN WITNESS WHEREOF, the said party of the first part here hereunto set its hand and seal the day and year first above-written.

SILVER BELL INDUSTRIES, INC.

By Stephen C. Nichols
President

By Reginald H. Landon
Chairman of the Board

STATE OF COLORADO

City and County of Denver

this 31st day of December, 1973, by Stephen L. R. Nichols, President, and Eugene A. Sardes, Chairman of the Board, of SILVER BELL INDUSTRIES, INC., who acknowledged that the foregoing instrument was executed with proper authority from Silver Bell Industries, Inc. as the act of such corporation.

Witness my hand and official seal.

Notary Public

My commission expires:

My Commission expires March 16, 1974

209399
PAID \$ 8.00

State of Colorado)
County of San Miguel) ss

Filed for record: December 18, 1978. / Time: 10:50
A.M. and duly recorded in Book 375 Pages 665-668

by *John C. Capps* Recorder Deputy

ASSIGNMENT OF MINING LEASE

THIS ASSIGNMENT OF MINING LEASE made this 5th day
of December, 1978, by and between

SILVER BELL INDUSTRIES, INC., formerly
Silver Bell Mines Co., a Colorado cor-
poration, whose address is 158 Fillmore
Street, Denver, Colorado 80206, herein-
after referred to as "Assignor"

and

MINERALS EXPLORATION COMPANY, a California
corporation duly qualified to do business
in, among others, the States of Colorado and
Wyoming, and whose address is P.O. Box 54945,
Los Angeles, California 90054, hereinafter
referred to as "Assignee";

W I T N E S S E T H:

WHEREAS, Assignor and F. W. Baumgartner, an individual
of Denver, Colorado, entered into a Purchase Agreement dated
May 30, 1970, pursuant to which Baumgartner assigned to Assignor
all of his right, title and interest in a certain Mining Lease
dated December 21, 1966, by and between Henry A. Pollman, John J.
Pollman and W. F. Pollman of Telluride, Colorado, as Lessor, and
Baumgartner, as Lessee, subject to the terms and conditions of
said Purchase Agreement; and

WHEREAS, the assignment required to be made by Baumgartner
was put into the hands of an independent escrow agent and a memo-
randum of such assignment was recorded to protect Assignor against
bone fide purchasers; and

WHEREAS, the subject assignment remains in escrow pending
the satisfaction of the terms and conditions of the Purchase
Agreement dated May 30, 1970; and

WHEREAS, Assignor desires to assign and to convey to
Assignee all of its legal and/or equitable right, title and
interest in, to and under said Mining Lease.

NOW, THEREFORE, for and in consideration of the sum of
TEN DOLLARS (\$10.00) paid to Assignor and other good and valuable
consideration, the receipt and sufficiency of which is hereby

U 011137

acknowledged, Assignor does hereby grant, assign and set over to Assignee, its successors and assigns forever, any and all right, title and interest of Assignor which it may own or hereafter acquire in, to and under that certain Mining Lease, dated December 21, 1966, entered into by and between Henry A. Pollman, John J. Pollman and W. F. Pollman of Telluride, Colorado, as Lessor, and Franklin W. Baumgartner, as Lessee, said Mining Lease having been recorded in the records of San Miguel County, Colorado, in Book 375, Pages 34-39, covering certain patented and unpatented mining claims and properties, located in the Iron Springs Mining District, San Miguel County, Colorado, and more fully described in Exhibit "A" attached hereto and by this reference made a part hereof.

TO HAVE AND TO HOLD unto Assignee and its successors and assigns forever all of the Assignor's right, title and interest in, to and under the aforesaid Mining Lease which is presently subject to that certain Purchase Agreement, dated May 30, 1970, between Silver Bell Industries, Inc. and F. W. Baumgartner.

IN WITNESS WHEREOF, the Assignor has caused this Assignment of Mining Lease to be Executed the day and year first above written.

SILVER BELL INDUSTRIES, INC.,
A Colorado Corporation

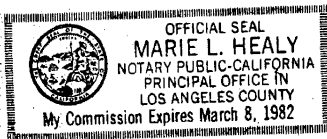
By Eugene H. Sanders
Eugene H. Sanders, President

ASSIGNOR



STATE OF CALIFORNIA)
) SS.
 COUNTY OF LOS ANGELES)

On this 5th day of December, 1978,
 before me, EUGENE H. SANDERS personally appeared, proved to me on
 the oath of David M. Hatfield to be the President of the corpora-
 tion that executed the within instrument; known to me to be the
 person who executed the within instrument on behalf of the corpora-
 tion therein named, and acknowledged to me that such corporation
 executed the same.



Marie L. Healy

 Notary Public

Exhibit "A" to Assignment of Mining Lease
 Dated the 5th day of December, 1978,
 Between Silver Bell Industries, Inc., Assignor,
 and Minerals Exploration Company, Assignee

PATENTED LODGE MINING CLAIMS
SAN MIGUEL COUNTY, COLORADO

<u>Claim Name</u>	<u>Mineral Survey Number</u>	<u>Approximate Acreage</u>
Marie Antoinette	16,421	10.183
Starlight	12,716	10.330
Attica (undivided	16,654	2.314
one-fourth interest)	Total	22.827 acres (more or less)

UNPATENTED LODGE MINING CLAIMS
SAN MIGUEL COUNTY, COLORADO

<u>Claim Name</u>	<u>Approximate Acreage</u>	<u>Mining Location Notice Recording Information</u>	
		<u>Book</u>	<u>Page</u>
Yellow Jacket)		119	606
Silver Prince)		119	608
Little Chief)	93.35 acres	119	608
Arrowhead)		119	607
Gold Queen)		119	607

Sections 35 and 36, Township 42 N., Range 9 W., and
 Section 31, Township 42 N., Range 8 W., Iron Springs
 Mining District, San Miguel County, Colorado.

U 011140

209400

PAID \$ 8.00

State of Colorado)
County of San Miguel)

Filed for record: December 18, 1978. Time: 10:56
A.M. and duly recorded in Book 375 Pages 669-
672.

Gay Cappis-Recorder
by *J. Arthur G. Smith* Deputy

ASSIGNMENT OF MINING LEASE

THIS ASSIGNMENT OF MINING LEASE made this 5th day
of December, 1978, by and between

SILVER BELL INDUSTRIES, INC., formerly
Silver Bell Mines Co., a Colorado corpora-
tion, whose address is 158 Fillmore Street,
Denver, Colorado 80206, hereinafter re-
ferred to as "Assignor"

and

MINERALS EXPLORATION COMPANY, a California
corporation duly qualified to do business in,
among others, the States of Colorado and
Wyoming, and whose address is P.O. Box 54945,
Los Angeles, California 90054, hereinafter
referred to as "Assignee";

W I T N E S S E T H:

WHEREAS, Assignor and F. W. Baumgartner, an individual
of Denver, Colorado, entered into a Purchase Agreement dated
May 30, 1970, pursuant to which Baumgartner assigned to Assignor
all of his right, title and interest in a certain Mining Lease
dated March 2, 1967, by and between Randolph Belisle of Ophir,
Colorado, as Lessor, and Baumgartner, as Lessee, subject to the
terms and conditions of said Purchase Agreement; and

WHEREAS, the assignment required to be made by Baumgartner
was put into the hands of an independent escrow agent and a memo-
randum of such assignment was recorded to protect Assignor against
bone fide purchasers; and

WHEREAS, the subject assignment remains in escrow pending
the satisfaction of the terms and conditions of the Purchase Agree-
ment dated May 30, 1970; and

WHEREAS, Assignor desires to assign and to convey to
Assignee all of its legal and/or equitable right, title and interest
in, to and under said Mining Lease.

NOW, THEREFORE, for and in consideration of the sum of
TEN DOLLARS (\$10.00) paid to Assignor and other good and valuable
consideration, the receipt and sufficiency of which is hereby
acknowledged, Assignor does hereby grant, assign and set over to

U 011141

Assignee, its successors and assigns forever, any and all right, title and interest of Assignor which it may own or hereafter acquire in, to and under that certain Mining Lease, dated March 2, 1967, entered into by and between Randolph Belisle of Ophir, Colorado, as Lessor, and Franklin W. Baumgartner, as Lessee, a Notice of said Mining Lease having been recorded in the records of San Miguel County, Colorado, in Book 375, at Pages 29-33, covering certain patented and unpatented mining claims and properties, located in the Iron Springs Mining District, San Miguel County, Colorado, and more fully described in Exhibit "A" attached hereto and by this reference made a part hereof.

TO HAVE AND TO HOLD unto Assignee and its successors and assigns forever all of the Assignor's right, title and interest in, to and under the aforesaid Mining Lease which is presently subject to that certain Purchase Agreement, dated May 30, 1970, between Silver Bell Industries, Inc. and F. W. Baumgartner.

IN WITNESS WHEREOF, the Assignor has caused this Assignment of Mining Lease to be executed the day and year first above written.

SILVER BELL INDUSTRIES, INC.

A Colorado Corporation

By Eugene H. Sanders
Eugene H. Sanders, President

ASSIGNOR



STATE OF CALIFORNIA)
) SS.
 COUNTY OF LOS ANGELES)

On this 5th day of December, 1978,
 before me, EUGENE H. SANDERS personally appeared, proved to me on
 the oath of David M. Hatfield to be the President of the corpora-
 tion that executed the within instrument; known to me to be the
 person who executed the within instrument on behalf of the corpora-
 tion therein named, and acknowledged to me that such corporation
 executed the same.



Marie L. Healy
 Notary Public

Exhibit "A" to Assignment of Mining Lease
Dated the 5th day of December, 1978,
Between Silver Bell Industries, Inc.,
Assignor, and Minerals Exploration Company,
Assignee

PATENTED LODE MINING CLAIMS
SAN MIGUEL COUNTY, COLORADO

<u>Claim Name</u>	<u>Mineral Survey Number</u>	<u>Approximate Acreage</u>
New Dominion (Except grazing rights)	16,473	10.331 acres

UNPATENTED LODE MINING CLAIMS
SAN MIGUEL COUNTY, COLORADO

<u>Claim Name</u>	<u>Approximate Acreage</u>	<u>Mining Location Notice Recording Information</u>			
		<u>Original</u>		<u>Amended</u>	
		<u>Book</u>	<u>Page</u>	<u>Book</u>	<u>Page</u>
Black Jack)				319	489
Black Dragon)				319	490
Frank B)		122	407		
Frank B Millsite)	103.48	204	347		
Vera)	acres			319	486
Defense)				319	487
Slide)				319	485
Dorothy B)				319	488

All of the above claims except those portions that conflict with U.S.
Mineral Survey No. 7777, U.S. Mineral Survey No. 17726, and U.S.
Mineral Survey No. 10181 (Black Cloud Lode), all being located in
Sections 35 and 36, Township 42N., Range 9 W., and Section 31, Township
42 N., Range 8 W., in the Iron Springs Mining District, San Miguel
County, Colorado.

U 011144

209402
PAID \$ 6.00

State of Colorado)
County of San Miguel) ss

Filed for record: December 18, 1978. Time: 11:05 A.M. and duly recorded in Book 375 Pages 676-678.

Gay Capps-Recorder
by *Kathleen R. Rine* Deputy

QUITCLAIM DEED

THIS QUITCLAIM DEED made this 5th day of
December, 1978, by and between

SILVER BELL INDUSTRIES, INC., formerly
Silver Bell Mines Co., a Colorado corporation, whose address is 158 Fillmore Street, Denver, Colorado 80206, herein-after referred to as "Grantor"

and

MINERALS EXPLORATION COMPANY, a California corporation duly qualified to do business in, among others, the States of Colorado and Wyoming, and whose address is P.O. Box 54945, Los Angeles, California 90054, hereinafter referred to as "Grantee";

W I T N E S S E T H:

In consideration of the sum of TEN DOLLARS (\$10.00) paid to Grantor and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Grantor does hereby grant, bargain, sell, remise, release and forever quitclaim unto Grantee, its successors and assigns forever, all the right, title, interest, claim and demand of Grantor which it may own or hereafter acquire in, to and under certain unpatented lode mining claims and properties located in San Miguel County, Colorado, as more particularly described in Exhibit "A" attached hereto and by this reference made a part hereof.

TO HAVE AND TO HOLD unto Grantee and its successors and assigns forever all of the above mining claims, properties and interest (all referred to as the "Claims" in this Deed), together with any and all mines, veins, lodes and mineral deposits now owned or hereafter acquired by Grantor, its successors and assigns, extending from or into or contained in the lands on which said Claims are located; all right, title and interest of Grantor in and to the surface and subsurface of said lands and all water, water rights, easements or rights of way now or hereafter owned or held by Grantor, its successors and assigns, in, upon or under said lands or pertaining thereto

U 011145

and all tenements, hereditaments and appurtenances thereof.

Said Claims are presently subject to the terms and conditions of that certain Purchase Agreement dated May 30, 1970, by and between Silver Bell Industries, Inc. and F. W. Baumgartner.

IN WITNESS WHEREOF the Grantor hereto has caused this Quitclaim Deed to be executed the day and year first above written.

SILVER BELL INDUSTRIES, INC.

A Colorado Corporation

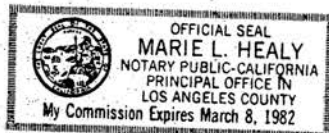
By Eugene H. Sanders
Eugene H. Sanders, President

GRANTOR



STATE OF CALIFORNIA)
) SS.
COUNTY OF LOS ANGELES)

On this 5th day of December, 1978, before me, EUGENE H. SANDERS personally appeared, proved to me on the oath of David M. Hatfield to be the President of the corporation that executed the within instrument; known to me to be the person who executed the within instrument on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same.



Marie L. Healy
Notary Public

Exhibit "A" to Quitclaim Deed dated the
5th day of December, 1978,
 Between Silver Bell Industries, Inc.,
 Grantor, and Minerals Exploration Company,
 Grantee.

UNPATENTED LODE MINING CLAIMS
SAN MIGUEL COUNTY, COLORADO

Claim Name	Approximate Acreage	Mining Location Notice Recording Information			
		Original		Amended	
		Book	Page	Book	Page
Ruth Lode Claims)		317	528-554 incl.	336	899-935 incl.
Nos. 1-33, inclusive)	497.92 acres	330	112-131 incl.		
35-38, inclusive)	(more or less)				
<u>Ophir</u> Lode Claims)		317	217-225 incl.	338	104-195 incl.
Nos. 1-74, inclusive)	960.31 acres		227-287 incl.		
93-109, inclusive)	(more or less)	330	314-327 incl.		
			109-111 incl.		

U 011147

PAID \$6.50

219404

State of Colorado
County of San Miguel

Filed for record December 22, 1980
Time: 10:30 A.M. and duly recorded in
Book 390 Pages 997-999.

Gay Caprio-Recorder
by *Katherine Gue* Deputy

QUITCLAIM

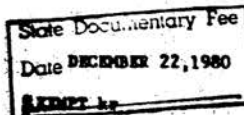
THIS QUITCLAIM made this 13th day of

November, 1980, by and between

MOLYCORP, INC., a Delaware corporation
whose address is 461 S. Bolyston Street,
Los Angeles, California 90017, hereinafter
referred to as "First Party"

and

FLEET RESOURCES, INC., a corporation, whose
address is 5325 S. Valentia Way, Englewood,
Colorado 80111, hereinafter referred to
as "Second Party";



WITNESSETH:

In consideration of the sum of TEN DOLLARS (\$10.00)
paid to First Party and other good and valuable consideration, the
receipt and sufficiency of which is hereby acknowledged, First
Party does hereby remise, release and quitclaim unto Second Party,
its successors and assigns forever, all the right, title, interest,
claim and demand which the First Party has in, to and under the
following described millsite claims and properties, or any interest
therein, lying and being situated in San Miguel County, Colorado,
to-wit:

Location Certificate
Recorded in San Miguel
County Colorado

<u>Claim Name</u>	<u>Date of Location</u>	<u>Book</u>	<u>Page</u>	<u>Serial Number</u>
Silverbell Millsite	02-20-1980	385	921	CMC 113991
Butler Millsite	02-20-1980	385	922	CMC 113992

TO HAVE AND TO HOLD unto Second Party and its successors
and assigns forever all of the above millsite claims, properties
and interest (all referred to as the "Claims" in this Quitclaim),
together with all right, title and interest of First Party in and
to the surface and subsurface of said lands and all water, water

U 011201

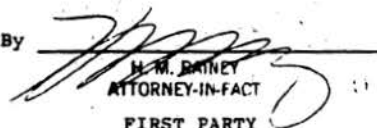
rights, easements or rights of way of the First Party, its successors and assigns, in, upon or under said lands or pertaining thereto and all tenements, hereditaments and appurtenances thereof.

Further consideration for this Quitclaim is Second Party's acceptance of the Claims on an as is basis and without warranty, either expressed or implied, of title, fitness for purpose, merchantability or any other similar or dissimilar condition or covenant and subject to all obligations and duties burdening the Claims including, but not limited to, abandonment or restoration to the extent required by law.

IN WITNESS WHEREOF the First Party hereto has caused this Quitclaim to be executed the day and year first above written.

MOLYCORP, INC.

By


H. M. RATNEY
ATTORNEY-IN-FACT
FIRST PARTY

STATE OF Illinois)
) ss.
COUNTY OF Peoria)

The foregoing instrument was acknowledged before
me this 12th day of November, 1980 by
H. M. RAINEY, as attorney-in-fact on behalf of Molycorp, Inc.

Witness my hand and official seal.



George F. Gual
Notary Public

My Commission Expires: 1-25-84

STATE OF _____)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before
me this _____ day of _____, 1980 by
H. M. RAINEY, as attorney-in-fact on behalf of Minerals
Exploration Company.

Witness my hand and official seal.

Notary Public

My Commission Expires: _____

U 011203